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ABSTRACT

This book is a practical guide that explains how both businesses and schools have benefitted from partnerships. The guide also contains sample letters, charts, forms, and further resources. The following 16 chapters are included: "What's in It for Business?" (Carver C. Gayton); "What's in It for Education: The Secondary Perspective" (Clifford A. Migal); "What's in It for Education: The Postsecondary Perspective" (Gary Ballmann); "Recruiting Business Partners" (Barbara Nicol, Brad Carleton, Julie Wallace); "Nurturing a Budding Partnership: What to Do When a Business Says Yes" (Barbara Nicol, Brad Carleton, Julie Wallace); "Involving Business in Curriculum Development: What's the Reality?" (Ellen D. Wernick); "Work-Based Learning: How You Can Begin to Plan Effective Programs" (James L. Hoerner); "Strategies for Work-Based Learning" (James L. Hoerner); "Coordinating School- and Work-Based Learning" (Anne M. Stom); "Cultivating Mentors" (Anne M. Stom); "Legal and Labor Considerations" (Alice Potosky); "The Roles of Policymakers and Public Officials" (Randy Dorn); "Providing Business/Industry Experiences for Educators" (Patty Williamson); "Model Partnership with a Large Corporation: Siemens Stromberg-Carlson" (John Tobin, Suzanne Tesinsky); "Small Business Model: The Clark-Theders Insurance Agency, Inc." (Rick Theders); "Model of an Effective Partnership in the Government/Public Service Sector: Pennsylvania Department of Transportation" (John A. Polto); and "Vocational Student Organizations" (Alice Potosky). (KC)

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ED 404 554

POWERFUL PARTNERSHIPS

for

School-to-Career Success

Through Business & Education Cooperation

- The Business Role in Curriculum Development
- Effective Plans for Work-Based Learning
- Providing Industry Experience for Educators
- Overcoming Legal Obstacles
- Model Programs
- Resource Lists

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Powerful Partnerships
for
School-to-Careers Success through Business and Education Cooperation

Editor
Ann Dykman

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Preface

For Milwaukee Area Technical College, the news is both good and bad. The good news is that local manufacturing companies are riding a business boom, and they anticipate continuing growth in sales and earnings. Last year, MATC said it received 300 job offers for its technical and industrial graduates. The bad news? Companies can't find enough skilled workers to meet the demand. MATC can't supply enough qualified graduates, but the college intends to solve the problem by working diligently with industry partners.

Siemens Corp. had a similar problem in 1991. The third-largest public network supplier in the United States couldn't find enough technicians to properly install, engineer or manufacture its telecommunications equipment. To get out of this fix, the German company turned to a tradition long respected in its homeland—mentoring and apprenticeship. Siemens reached out to high schools and a community college near its Florida plant to arrange a tech prep program that now leads students toward high-skill, high-wage careers in telecommunications. As you'll read in chapter 13 of this book, students who successfully complete the high school component get a two-year college education and a paid work experience courtesy of Siemens.

More and more, these kinds of business-education partnerships are becoming a necessity in the United States. The country's economy is no longer primarily industrial and certainly not insular. It is tied to global trade and is increasingly service-oriented. As the Motorolas and Fords as well as many smaller companies of the world can attest, this shift has resulted in a need for employees with more varied skills. Today's successful worker is a technologically savvy team player who can serve customers as well as he or she can program a computer or keep a digital manufacturing system running. Unfortunately, employers continue to find this qualified worker elusive.

How can we solve this problem? Not by pointing fingers and waiting for someone else to do the hard work. Many businesses can't afford to train and remediate the workforce. Educators, pressed to use costly state-of-the art technology, must balance the labor pool needs of business with the broad and complex educational needs of students. Around the country, though, hundreds of employers and educators are finding ways to share ideas, expertise and financial resources to forge solutions that best serve students as well as each other.

But what exists is not enough. If the U.S. is to achieve the admirable but challenging goals of the school-to-careers movement, every school, every company and every public agency must share the responsibility of educating the country's children.

That's why AVA set out to produce this book, a practical guide that highlights the work of several pioneering partners and shows, step by step, how others can follow in their footsteps and avoid the pitfalls they've already encountered and overcome. You'll hear from:

- Training coordinators at large companies such as Siemens and Boeing.
- The president of a small Ohio insurance agency.
- A former Washington state legislator who helped pass school-to-careers bills.
- Educators in high schools and community colleges.
- And experts who have tracked the progress of business-education partnerships for years.

In straightforward and jargon-free language, these authors and others deliver chapters organized in a completely user-friendly fashion. You'll learn *specifically* how both businesses and schools have benefited from partnerships and a host of other "how-tos," including recruiting partners, planning activities, measuring results, setting up apprenticeships and other work-based learning experiences, involving business in curriculum development, arranging industry internships for teachers and addressing the legal and workforce concerns of managers and labor unions. This is meant to be a practical guide that you can refer to not only for guidance but for sample letters, charts, forms and further resources.

There are some truly heartening examples of business-education partnerships highlighted throughout this book. The people involved are making the relationships work with an unwavering commitment of time and resources, belief in the purpose of their efforts, open and honest communication and a great deal of organization and coordination. Their experiences surely reflect those of the many other partnerships occurring across the country.

This book addresses many of the questions and concerns that sometimes swirl around the notion of business-education partnerships: How can we make sure that we don't give up control of our programs? What's the best way to find a partner? How can we get schools to deliver students who have the skills we need? Will my company or school be liable if a student is injured during a work experience? How can we get more public funding to support our efforts? Answers to these and many other questions are in the following pages.

We hope *Powerful Partnerships* becomes a well-worn primer that you'll use to establish more—and more fruitful—public-private ventures in your area. Effective school-to-careers systems are built on the willingness of educators and business people to ask, "Can you help us out?" And then to listen to each other. For the details in between, just turn the page.

Ann Dykman, Editor

Chapter 1

What's In It For Business?

By Carver C. Gayton
The Boeing Company

The challenges that we at the Boeing Company face in a global economy are, in many respects, the same challenges facing other large, high-tech manufacturing companies throughout the nation. In fact, these challenges also are similar to those facing small businesses whose keenest competition probably comes not from across the globe but from just across the street. If Boeing is to remain globally competitive as one of the top exporters in the United States and the No. 1 commercial airplane company in the world — just as if Smith's Computer Store is to remain the top PC distributor on Main Street — we must, quite simply, look at more and better ways to cut costs and at the same time improve our processes, products and services.

A few years ago, the Ministry of International Trade and Industry in Japan created a list of the industries it thought would enjoy the most growth in the 1990s and the early part of the 21st century. The list includes microelectronics, computers, biotechnology, new material sciences industries, telecommunications, commercial aircraft and manufacturing machine tools and robotics. All of these industries rely on brain power rather than on any particular natural resources such as wide rivers, good harbors, fertile fields and temperate seasons. Consequently, they can be located anywhere on earth — anywhere, that is, that has the resource of people with a good knowledge base.

Today knowledge has become the only source of sustainable, long-term competitive advantage, but knowledge can be derived only through the skills of individuals. A primary way we will continue to be competitive in the world economy now and 20 years from now is to ensure that we have a highly skilled and motivated workforce.

Faulty Focus

As a nation, we have to correct the shortcomings in our education systems, particularly within the K-12 arena. And businesses such as Boeing have to help out, because without properly educated applicants from which to select employees, businesses won't be able to compete successfully in the new economy. Here are some sobering facts about our education system — and each one limits our nation's global competitiveness:

- Math test scores of the top 1 percent of America's high school seniors would place them only in the 15th percentile in Japan.

- In science subjects, American 10-year-olds place eighth out of 15 countries — and by age 13, their position slips to thirteenth.

- The graduation rate from high school in the U.S. is only 71 percent compared with 91 percent in Germany and 94 percent in Japan. See Lester Thurow's *Head to Head* for a complete discussion of the foregoing statistics.

Furthermore, the U.S. educational system is myopically focused on preparing students to attend college and to earn a baccalaureate degree. But the following statistics, from Hedrick Smith's *Rethinking America* and the U.S. Department of Labor, show the flaw in this focus:

- 70 percent of the jobs in America do not require a baccalaureate degree.

- 70 to 75 percent of high school graduates do not earn a baccalaureate degree.

Nevertheless, because of the pervasiveness of the nation's faulty educational focus, too many people have the attitude that preparing kids for anything other than four years of college is preparing them for a second-class life. Few students — and few parents and teachers and administrators — are aware of other opportunities. The result is that students are either bound for college or bound for nowhere.

Lester Thurow, an economist at the Massachusetts Institute of Technology, puts the challenge of our education system into perspective within the global marketplace. He points out that America does well in educating the top 25 percent of the labor force, which is the group that will invent the new products of tomorrow. However, it doesn't really matter if someone can invent products if others can't produce them. Consequently, the real route to success, Thurow points out, is not only in educating the top 25 percent who will be the inventors but also in educating the majority of the population who will be the producers.

Unfortunately, compared to our global competitors, America has not done a good job of educating the latter group, which Dale Parnell refers to as the "neglected majority." If the majority cannot learn what must be learned, then new high-tech processes cannot be employed. But since high-tech processes are the key to success in the new economy, businesses must be able to use them — which means that an educated majority is an imperative. To employ the high-tech processes that will be the basis for the economy in the 21st century, average workers must have education and skill levels that were not needed in the past.

As Boeing Chairman Frank Shrontz has said, "There are no quick fixes for the problems that affect our schools. The challenge is simply too big for any one sector of society to tackle alone. Educators cannot do it by themselves; neither can parents and students, nor businesses, nor even the combined resources of our local, state and federal governments. The solution is partnerships that bring together individual citizens and groups in both the public and private sectors.

A Solution: Active Partnerships

Businesses must become directly involved in partnerships to address necessary changes in education. One way that businesses can help is to support development of programs that give all students a career focus and guide them toward the education they will need to achieve their goals. Tech prep programs and applied academics courses are examples of this new educational focus. Rigorous, competency-based, hands-on applied academics courses in physics, math, communications and biology/chemistry tend to prepare students well for entering the manufacturing workforce. In tech prep programs, students can take applied academics courses along with technical skills classes in their junior and senior years in high school and receive credit toward the completion of associate's degrees at community colleges.

Of all the recent education reform efforts, tech prep has the greatest chance of becoming a truly collaborative partnership among educators, labor, government and business and industry and, as a result, of having the most significant impact. We are convinced that tech prep is the most comprehensive educational model for integrating technical and academic studies to prepare our future "work-ready" employees.

But if tech prep is to have a long-range and pervasive impact on schools, colleges and industry, considerable work must be done to ensure that business and industry will be full partners in the process. At the tech prep conferences I have attended throughout the nation over the last two years, industry representatives have been conspicuous by their absence. In contrast, there is considerable enthusiasm within the educational community, particularly within K-12 institutions, which is a positive sign. However, I believe tech prep is too important to be the exclusive purview of educators. As Frank Shrontz points out, the educational institutions cannot do this alone — they must have active participation from business, labor and government.

Enlightened Self-Interest

Tech prep programs provide the type of employee who will enable Boeing, other manufacturing companies and even non-manufacturing companies to maintain a competitive advantage well into the 21st century. Competency-based, hands-on applied academics courses—combined with work-based learning provided through experiences like internships—produce people who are truly ready to enter the workforce.

That is why we want to increase our role and our involvement in working with schools and colleges. We are involved in educational processes not just to be a "good corporate citizen" but because of our "enlightened self interest" — it benefits the company as well as the community.

There are other, more specific benefits that we expect to attain through our partnership with education.

- ***Lower training costs.*** Tech prep courses that students take in high schools and community colleges will be work-related and will facilitate their entry into the workforce. This enables businesses to reduce the amount of training that new employees need when they start work.

- ***More productive employees.*** Because of the education and experience they receive through hands-on, applied academics courses, internships and job shadowing, new employees hired through such programs are ready to contribute the day they are hired. At Boeing, for example, our interns complete many of the courses we offer to our new employees — so when our interns become full-fledged employees, they are already ahead of the curve.

- ***Lower employee turnover.*** Internships lead to realistic job expectations and help ensure the right fit for the job, both for the employee and the company. Additionally, the pre-established relationship developed during the intern program helps instill a commitment between the employee and the company. At Boeing, our program will help reduce our attrition rate.

- ***Lower recruiting costs.*** Tech prep programs help decrease recruiting costs because they increase the pool of qualified employees available. Part of the reason for lower costs is that the school faculty and administrators involved in the programs help select program participants. They know and understand the program requirements, and that improves their recruiting ability. In 1996, Boeing had 43 high school faculty and administrators involved with our program, and we have had a total of 145 since 1991.

- ***Better pre-employment evaluation.*** There is no better way to evaluate prospective employees than through an intern program. A company can observe a potential employee performing actual work at the actual work site. At Boeing, line managers are fully involved in this process. They work in conjunction with high school faculty and administrators to select students who are most likely to succeed in the program, they take a vested interest in and mentor the students they select, and they eventually make hiring recommendations. They also provide detailed assessments at the end of each internship, and the company provides feedback to the interns regarding potential areas of improvement.

- ***Improved high school and college curricula.*** Tech prep programs and other partnerships with the educational community give businesses an avenue to influence both high school and college curricula. Through these collaborative efforts with the educational community and other industry representatives, businesses can help develop specific standards covering not only technical skills but also "soft" skills such as the ability to work in teams and communicate effectively.

- ***Higher morale.*** Tech prep programs and internships expose young people to the work environment and to specific skill training. These programs also show them that the company is willing to invest in them. Consequently, students have greater confidence in their abilities and in their relationship to the company, and that leads to higher morale.

- ***Improved community service.*** Contributions to the community and to people's quality of life may be difficult to measure, at least in terms of dollars and cents. A program that reaches students who might otherwise drop out of school clearly benefits the community, and these programs provide that service. A number of our interns have said they would have dropped out if not for Boeing's program — in fact, some of these students have gone on to four-year institutions, some with the aid of scholarships. Because the skills they acquire are based on accepted industry standards, students who complete these programs are capable of earning "family wage" incomes in a variety of manufacturing occupations, bringing them stability and flexibility they otherwise might not enjoy.

Benefits for Others

These programs bring benefits to other groups besides business.

Involving various players. We are pleased to see high school teachers, two- and four-year college instructors, state vocational staff, union representatives and private trade schools sitting down together to design school-to-careers programs. A great example of this kind of involvement is the Manufacturing Technology Advisory Group (MTAG), which has brought together a broad spectrum of people to develop standards for a manufacturing technology degree program (discussed on pages 8–9). These standards have been approved by the Washington State Board for Community and Technical Colleges. In essence, this degree program—the first of its kind in the state—has been driven by a body of "social partners."

Integrating academic and vocational courses. Academic and vocational faculty are discovering their mutual needs and concerns. Each discipline has much to learn from the other, and each will find students responding positively as subject matter is reinforced across those invisible walls that separate the disciplines. But those walls still in existence must be broken down. Our student internship pilot program in summer 1993 demonstrated clearly that a focused on-the-job experience can open new and relevant worlds to students. One student's comment expressed the feelings of many: "I learned more math during my four-week internship than in four years in school."

Achieving academic credit for vocational education courses. With increased curriculum integration, vocational-technical education courses are receiving more academic accreditation. In many cases, high school students now can take vocational-technical education courses and receive credits transferrable to postsecondary institutions. This makes these courses more attractive because they lead to more education and more opportunities.

In Washington state, I served on a special legislative task force that reviewed the possibility of approving certain vocational course work for academic equivalency. We recommended that applicable courses could be approved if they fulfilled the core requirements for entry to the state's university system, and the Higher Education Coordinating Board of Washington agreed. I believe that many students, parents and counselors now will be more interested in school-to-careers programs because they know doors to a baccalaureate degree will not be slammed shut later on.

Connecting Education and the Workplace

The talk about ties between education and business is not just theoretical. It is real. What occurs in schools — or should be occurring in schools that have successful, thoughtful partnerships with business — also occurs in the workplace.

Boeing managers and employees agree on three essential processes:

- Adapting to rapidly changing technology
- Working within teams
- Developing leadership abilities

Each of these processes is important to Boeing's continued success. And each one parallels a similar process used in successful schools.

Adapting to rapidly changing technology. Within a high-tech environment like Boeing, technology tends to change at a faster pace than in previous decades. Employees must have the core competencies, problem-solving skills and higher-level thinking skills to quickly learn how to adjust to new technologies. More than ever, technologies and disciplines are overlapping and merging. Employees must be prepared intellectually and emotionally to deal with the fact that they may not have the same work assignment two years after they have entered the job and that their work probably will be broader in scope.

Now schools with tech prep programs are teaching these core competencies and skills. They also are instilling a desire for lifelong learning. Technology, like history, marches on — there always will be something new to learn.

For instance, the impact of technology on Boeing is reflected in the pervasiveness of the computer on every major work level within the company — something that was not true less than 10 years ago. Now virtually every engineer must be knowledgeable about computer-aided design. The factory worker generally is operating and maintaining "numerically controlled" machines — computers Clerical workers operate a variety of wordprocessing software programs. If Boeing employees back in the middle to late 1980s didn't know about computers, they had to learn about them quickly. Likewise, today's employees will need to learn about whatever new technologies will be introduced by 2005.

Working in teams. From a practical point of view, working in isolated functional areas at the outset of projects creates an atmosphere of "turf building" and distrust — and that ultimately leads to more costly products and services. Individuals representing a variety of functions and disciplines must have the ability to work together toward common goals for products and services. Each person must see how his or her task is interconnected with the tasks of others.

Today's schools also are adopting this perspective of interconnection. The walls between "academic" courses and "vocational" courses are crumbling. Teachers from different disciplines are working together to integrate their courses to show students how information from one subject can be applied to another subject. This new approach, encouraged in partnerships with business, benefits us because this way of thinking becomes ingrained in students at an early age. Again, teamwork becomes something a business does not have to teach from scratch.

More specifically, working in teams requires employees to have good communication skills as well as specialized technological skills. For example, Boeing's profile of "Desired Attributes of an Engineer" states, as might be expected, that he or she should have a good understanding of engineering fundamentals as well as a basic understanding of the context in which engineering is practiced (economics, history, the environment, societal needs). In addition, though, the profile further states that the engineer should possess these attributes:

- an understanding of all aspects of the industry
- strong communication skills,
- high ethical standards,
- an ability to think critically and creatively,
- flexibility/adaptability,
- curiosity and a desire for lifelong learning
- a profound understanding of and commitment to teamwork.

These additional attributes can be applied not just to an engineer but to any employee in any position. Schools now are including these important "soft" skills in their curricula.

Developing leadership abilities. For most of this century, the scientific management style initiated by Frederick Taylor has been the predominant management approach throughout our public and private bureaucracies. With its focus on the "one best way" to develop a product or service, managers typically were autocratic and authoritarian, and employees were forced into narrow, inflexible jobs dictated by managers.

With the impact of technology and participatory management styles, managers within the new industrial cultures have different challenges. Boeing managers now focus on bringing employees together as teams, gleaning diverse perspectives and knowledge from each employee. This requires that managers be aggressive listeners. They also provide leadership to ensure that team and company goals are realized, and they identify the strongest attributes of each employee. This new culture benefits the employee, the team and ultimately the entire company.

Similarly, the educational styles of today's schools are changing. Like yesterday's business managers, yesterday's teachers were autocratic — they stood in front of the class and lectured, and students regurgitated the information they were fed. But today's classes are student centered, with students participating in hands-on activities, working with others on group projects and taking an active role in the learning process. This teaches them to be doers and thinkers — from which spring leaders.

These new thrusts are being used within Boeing, and they are beginning to have a significant, positive impact on the entire culture of the company. We are not where we want to be today, but we know we must stay the course if we expect long-term success.

At Boeing, we have seen firsthand that true collaboration between business and education can work and that all the players — in essence, the community at large — can benefit. Of course, we don't have all the answers at Boeing or within the state of Washington because all the results are not in and our process is continually evolving. However, we believe we have a good beginning. Rather than following the same old approaches, we are instead focusing on real partnerships, real collaboration — and real success.

CARVER C. GAYTON
is company offices director of college and university relations for the Boeing Company, Seattle, Washington.

The Boeing Tech Prep Program

Over the past nine years, Boeing has initiated a variety of programs with schools and colleges. Improving education has been the company's primary external priority — in fact, Boeing is so committed to tech prep that it has provided more than $3 million to help develop these programs. Boeing Chairman Shrontz is personally in the forefront of many of these efforts. For example, Shrontz is vice chairman of the New American Schools Development Corporation, a non-profit organization that funds innovative education projects across the nation.

Boeing's involvement in tech prep has been in two phases. The initial phase helped to build the applied academics foundation in the secondary school system. The second phase promoted the development of a statewide manufacturing technology degree program and a work-based student internship program related to manufacturing technology.

Phase 1 — Building the Foundation (1990-1993)

Boeing's approach to support and promote tech prep was to first provide funds to various high schools and community colleges throughout Washington state. Primarily, these funds were used for the following activities.

- "Seed" grants to 60 high schools throughout Washington to implement applied academics programs in physics (principles of technology), mathematics and communications.
- Articulation grants to community colleges to create a tech prep partnership with high schools to create a new curriculum that allows juniors and seniors in high school to take courses that provide credit toward an associate's degree.
- A summer internship program for high school applied academics teachers. The program puts them in a manufacturing workplace environment and gives them experience they can take back to the classroom.

Phase 2 — Developing a Manufacturing Technology Degree Program (1993 and Beyond)

In December 1992, Boeing and representatives from other industries, labor, education and state government formed an ad hoc committee chartered to promote and support the development of a manufacturing education program for the state's existing and future workforce. The Manufacturing Technology Advisory Group (MTAG) is assisting community and technical colleges in developing a degree program that will teach students the broad and basic skills required to effectively function in today's increasingly complex and competitive manufacturing organizations.

(continued on next page)

Here are some of the group's activities:

- Identifying the basic manufacturing entry-level skills.
- Soliciting the involvement of other manufacturing firms in the state.
- Advising secondary schools and community and technical colleges on a "core" curriculum that responds to industry's needs.
- Determining methods of measuring and evaluating students' attainment of competencies.
- Developing a process by which industry can effectively become involved in tech prep.

We hope that the MTD program will begin developing in high school students the broad, basic skills that are applicable not only to manufacturing but to other fields as well. Also, keeping the beginning course of study *broad and basic*, particularly at the high school level, allows students flexibility in career choices. They will have the time and opportunity to assess all possibilities and expand their knowledge before they begin focusing on their chosen areas of interest, whether in manufacturing or a totally unrelated field.

The table in **Exhibit 1-1** depicts skill levels and where students enrolled in an MTD program learn these skills.

In February 1993, Boeing approved a summer internship program for MTD students. In three progressive sessions offered in the summers between grades 11 and 14, students learn about career opportunities in manufacturing, basic factory skills and details of specialty fields within manufacturing. The sessions are being coordinated with high schools and community colleges to ensure that the instruction complements the students' academic courses.

The student intern program began in summer 1993 with 25 students and is expected to reach more than 240 students by 1997. Boeing also is continuing the teacher internship program that it started during Phase 1.

EXHIBIT 1-1 SKILL LEVELS

A Suggested Manufacturing Technology Educational Path

Workplace Skill Levels	Examples of Skills	Where Skills Are Learned
Fundamental workplace skills	• Basic skills (reading, writing, mathematics) • Thinking skills • Personal qualities	High school
Basic manufacturing technology (technical core)	• Measurement • Print interpretation • Layout and inspection • Occupational safety and health • Business organizations • Product and process control • Quality in manufacturing • Material science	Junior and senior year of high school and first year of community college and summer intern programs
Manufacturing technology specialties	• Electronics • Machining • Production planning • CNC programming • Computing analyst	Community college and summer intern programs
Advanced manufacturing technologies	• Industrial management • Manufacturing engineering • Industrial engineering • Computer science	Four-year college or university

Chapter 2 (PART I)

What's in It for Education:

The Secondary Perspective

By Clifford A. Migal
Great Oaks Institute of Technology and Career Development

A partnership is like a marriage: both parties must work at it daily, trust each other and be open minded, honest and willing to compromise in the best interest of the relationship.

In a business-education partnership, the business does not dictate how the school is run, nor do educators say only, "Give us more resources to do more of the same." A business-education partnership must be a long-term commitment toward quality education that prepares a highly skilled workforce. But everybody needs to remember that long-term results take a long time to achieve.

The call to establish partnerships in vocational-technical education is not a new idea. The Smith-Hughes Act of 1917 and subsequent federal education legislation references the strength of partnerships. Effective vocational programs in this country always have had links of one type or another to business.

Now under the banner of "school-to-careers," this phenomenon of business, labor and education working together to provide a more productive workforce is catching on as a necessity in all aspects of elementary, secondary and postsecondary education. Industry, labor and education need each other if the nation is to have an educated workforce with the academic, occupational and employability skills required for a healthy, successful and ever-changing global economy.

Stimulating a stronger link between the business community and education is essential. Addressing immediate employer needs is an important focus, but we also must keep in perspective the needs of the learner. In fact, education's primary focus in these partnerships is on students — when students benefit, education benefits. But it's important always to remember that each party has to benefit *in conjunction with* the other parties, not at the expense of them.

Consequently, education has to be:

- **Flexible** in its ability to equip students with strong foundation skills.

- **Honest** in demonstrating how it can respond to the training needs of each and every employer or employer group.

- **Realistic** in its commitment to reflect the real world of work of today and tomorrow in education programs.
- **Involved** in improving *the total community.*
- **Open** to active involvement from industry, labor and the general community in all aspects of the organization.

Each stakeholder needs to understand the benefits and responsibilities associated with the school-to-work initiative to develop a shared sense of ownership and commitment. The list in **Exhibit 2-1,** from Jobs for the Future, provides some insights on benefits and responsibilities of stakeholders in a partnership.

Benefits to One Vo-Tech Institution

The Great Oaks Institute of Technology and Career Development in Cincinnati is a vocational-technical education center that serves 36 school districts spread across 2,240 square miles. It has a strong, national reputation as a quality educational institution—a reputation it has achieved with the help of a supportive state government and meaningful partnerships with area businesses.

Industry Exchange

Great Oaks offers approximately 60 different career majors across its four campuses. While a number of career majors are duplicated at each operational center, each one also has unique career majors that tie to the geographic region it serves. Industry plays a vital role in determining the career majors offered as well as the competencies students must acquire in each program.

Great Oaks has a Council on Vocational Education, made up of 18 to 20 corporate-level management people, that counsels the president/CEO of Great Oaks on the operation and vision of the organization. For example, several years ago the council saw the need for a formal program to keep all certified staff current with what was happening in the world of work so they could bring new ideas, techniques and resources into the schools.

As a result, the council offers a program for full-time Great Oaks staff members to encourage them to spend a 40-hour work week outside the school in their area of expertise. There's room enough each year for 50 of Great Oaks' 250 educators — and not just academic and vocational teachers but also those who work in student services, with special populations or on projects such as grant writing and career development programs.

A special education coordinator, for example, may work with students in five or six different career clusters. We might place that person on a construction site where she can deal with personnel matters and other issues that concern special populations in that field. A vocational instructor whose discipline is manufacturing technology might do an internship in a plant and work on the line for exposure to the latest technology. Academic and project staff spend a total of 40 hours spread across two or three occupational fields.

We ask that employers ensure every instructor experiences at least the orientation phase that one of their trainees must go through. We also ask employers to

EXHIBIT 2-1. BENEFITS FOR PARTICIPANTS

Responsibilities	*Benefits*
STUDENTS	
• Prepare for the experience • Develop academic, occupational and employability skills • Adapt to the work site • Adhere to the school/employer/parent/student agreement	• Exposure to a range of occupations and educational opportunities • Increased opportunities for quality jobs after graduation • Work experience while going to school • Potential contacts that may broaden employment options • Enhanced self-confidence from success at school and work
EDUCATORS	
• Provide administrative leadership and support • Provide flexible scheduling • Provide thorough planning • Establish *real* partnerships that provide tangible, concrete benefits to students (not just promotional opportunities for business or the educational institution) • Require all academic subjects to be client-driven and include real-life applications • Prepare curriculum so every student who graduates is prepared for employment and/or further education	• Increased college placement and employment rates of graduates • Improved opportunities for professional development of the educational staff • Academic instruction integrated with actual work and life experience • Reduced dropout rate, improved attendance and increased enrollment • Better understanding of real-world applications of academic knowledge
EMPLOYERS	
• Initiate the program at the work site • Exercise decision-making in managing the program • Provide input to the school curriculum • Screen program applicants and mentors • Create work-based development opportunities for teachers • Provide work-based learning opportunities for students	• Access to an expanded pool of applicants • Ability to influence student development to meet industry requirements • Evaluation of potential employees in work settings • Improved quality of life in the community
MENTORS	
• Invest considerable time • Initiate the relationship • Let go when the time is right • Have realistic expectations	• Reputation for getting the job done • Ability to help in job performance • Increased opportunities to deal with larger tasks • Improved professional skills • Increased sense of pride and worth
PARENTS	
• Participate in their children's career exploration • Support their children's career motivation • Collaborate with employers and school personnel in the development and execution of the mentoring relationship	• Children with more maturity and independence at an earlier age • Increased pride from having children motivated about school and having opportunities to succeed in the workplace • Decreased stress from not having to deal with children who find no purpose in school and who continually underperform
GOVERNMENT AND COMMUNITY	
• Provide policy changes that will support the education of all children, adolescents and young adults • Provide the financial support necessary to develop a world-class workforce • Provide local community support	• Development of a skilled workforce • Enhanced employability of all youth • Economic growth through an expanded skilled workforce and taxpayer base

send some of their employees to the classroom to talk with students while that instructor is spending the work week at their company.

The teachers are guided on the job by a training plan similar to the one we use for student trainees. It spells out the specific skills in the areas in which we want that person to be exposed, such as a new software version the instructor needs help on or a piece of machinery that is so new it is not in our building.

Great Oaks staff receive invaluable benefits from this kind of partnership:

- A clear understanding of the orientation program that employees (our graduates) must follow when they are hired.
- An opportunity to view management techniques.
- Exposure to new machinery, software, hardware and production techniques.
- Hands-on experience in the career fields taught at Great Oaks.
- Reinforcement of the academic skills needed to enter, compete and advance in the field.
- A chance to encourage the industry to provide work-based learning experiences for students.

Each party in this partnership walks away with new insights about the role of the other partner. The program opens the door for the employer to help the instructor maintain a quality program. What comes out of almost every experience is a renewal for teachers. They appreciate the continuing education and can see firsthand how fast things are changing in industry. It gives them a new appreciation for what they're doing and a buoyed interest in making sure young people are concentrating on the competencies they will need on the job. They also make new friends in industry, and those new friends end up being mentors, guest speakers and part of a company team that's going to influence the human resources department to hire vo-tech graduates.

Youth Apprenticeships

Youth apprenticeships prepare students for successful careers through on-the-job experience combined with academic training. Without the cooperation of business, industry and labor, this opportunity—a proven winner for students—could not exist. In Ohio, apprenticeship programs are registered with the Ohio Bureau of Apprenticeship Training, and the companies pay students for their work on a scale from minimum wage to the typical salary of a one-year apprentice.

The state of Ohio has Vocational Education Planning Districts (VEPDs) designed to serve the vocational curriculum needs of local school districts. Great Oaks, which is one of eight VEPDs in the Cincinnati region, formed a youth apprenticeship program with the area vocational-technical districts and then with local associations such as Cincinnati Electrical Association, Association of Building Contractors, Greater Cincinnati Manufacturing Association and Cincinnati Restaurant Association. The partnerships were formed to represent 10 career majors. Associations then did the initial legwork to interest each of their company members in offering apprenticeships.

The program links secondary and postsecondary education, business, industry, labor and government to provide a seamless path. By the time trainees complete the two-year high school segment of the program, they will have worked approximately 2,200 hours — the equivalent of more than one whole year of full-time employment — and received 1,300 hours of school-based instruction.

In this program, students can

- Experience firsthand the connection between school and the workplace.
- Strengthen their academic skills.
- Affirm (or change) their choice of occupational field.
- Earn wages while still in school.
- Learn from skilled professionals.
- Increase their career options and gain greater worth in the labor market.
- Gain support from employer, mentor and an accrediting agency (in this case, Ohio's Bureau of Apprenticeship and Training).

And education gains:

- Skilled master craftsmen as trainers.
- Instructors exposed to masters in the field.
- Industry representatives who are true, participating, involved, committed partners in the teaching/learning process.
- Access to resources for the classroom.

The 75 business representatives and educators involved in the youth apprenticeship project worked together to establish a common school-based and work-based curriculum for each occupational major as well as a flexible delivery system to meet the needs of each occupational group. Industry and labor representatives select candidates and mentors for the program. They evaluate the competencies and clients as well as the program. This program, in its third year, started with 16 apprentices and has grown to 80 in nine occupational clusters.

A Mentoring Model

In the 1996–97 school year, Great Oaks embarked on a full-scale mentoring model at all four of its career centers. This program is a pilot effort developed by business, industry, labor and Great Oaks educational staff, administrators, parents and graduates.

Mentors are experienced professionals who have demonstrated success in their careers, who are supported and endorsed by their peers in business and industry and who are willing and able to involve themselves with students progressing through a career plan. They provide support, guidance and concrete assistance to students.

Great Oaks signs up mentors to help give students career guidance, demonstrate a skill at school or the work site, guide a student through career exploration in the work environment for one to two weeks, help arrange for summer employment and closely supervise the students' internship or apprenticeship experiences while keeping them on target with their career goals.

Now in its infancy, the Great Oaks mentoring model is being piloted in the four centers in two cluster areas, which brings the pool of current mentors to about 80. Each mentor team could work with up to three students. The eventual goal is a one-on-one mentor for each student.

This type of formalized student mentoring program can significantly expand the amount of total career experiences for our students. The motivation and self-esteem an adult mentor can inspire in students often is unequaled.

Continuous Quality Improvement Seminar Series

Today's students need to learn not only the technical and academic skills applicable to their career areas but how to function within a new management model. Whatever you want to call it — total quality management, continuous quality improvement, quality circles — high-performance companies are shedding the top-down management models of the past and moving to team decision-making. This means schools must move away from teaching students to be passive listeners and instead mirror the contemporary practices of business and industry.

Great Oaks provides "quality improvement" training for all second-year students to give them a leg up on the terminology and workings of an employee team. There are no textbooks or tests. The whole enterprise rests on students being there every day and participating with their team. A group of 50 to 75 students in any one period will be broken into teams that are asked to deal with substantive topics, such as the issue of diversity in the workplace. The instructors tell the students, "In the workplace, you're going to be working with people of different racial groups, ethnic groups and gender groups. How would you want to be treated? What problems could arise and how would you deal with them?" Then they use the brainstorming technique, construct diagrams and vote on solutions. We also want to bring in business representatives when we discuss certain scenarios, such as the employer-employee relationship.

Periodically, instructors get release time to attend a quality improvement seminar. Great Oaks trained its instructors with a 40-hour seminar headed by an outside instructor who used VICA Total Quality Curriculum materials. And quality improvment staff within Great Oaks continually guide the process.

When a student completes this quality improvement training, it is one of the competencies that will show up in his or her career passport. Without access to businesses in our area, Great Oaks would not be able to provide this important training to its students and teachers.

Project HIRE

Project HIRE is a partnership among education, business and the Ohio state government to promote employment in targeted Ohio counties. As growth and expansion continue to strengthen Ohio's industrial base, businesses are facing a common problem: finding an adequate labor force. To keep companies in Ohio and to attract even more industry, Ohio's political leadership asked Great Oaks to develop a plan to confront this shortage of qualified workers.

Since the targeted counties had nearly full employment, Great Oaks realized that the program would have to tap new labor sources. This meant that education, business and government agencies — that is, both the public and private sectors — would have to cooperate to alleviate barriers to employment and provide the customized training and support necessary for employers to retain workers.

To create a pool of long-term employees, Great Oaks coordinates Project HIRE using a five-part strategy:

- **Recruit.** Great Oaks contacts human resource agencies, such as the Bureau of Vocational Rehabilitation and Bureau of Employment Services, to identify potential workers. We are going after any population we can to meet the need, including those who receive welfare and haven't held a steady job. We have built regional and state partnerships of participating agencies to overcome barriers to recruitment by offering child care, transportation and medical benefits while the worker is getting settled.

- **Train.** After determining what skills hiring companies are looking for, Great Oaks helps assess job candidates. Training, which usually occurs at the workplace (sometimes with the help of Great Oaks staff) may include pointers on interviewing, applications, appearance, attendance, safety, work ethics and occupational skills.

- **Place.** Once the candidates are sufficiently trained, Great Oaks staff help place them in jobs. The participating companies include Airborne Express, which needs people for its sort centers. The jobs involved pay from two to three times minimum wage. Since the end of May 1996, we have screened 850 potential employees and placed around 600. Others need training in both specific job skills and employability and basic academic skills.

- **Support.** Great Oaks staff are available to provide additional training and assistance after employees are on the job. Basic academics, teamwork, work-family management, budgeting and interpersonal skills are just a few of the areas covered for new employees.

- **Retain.** Job coaches and counselors help participants overcome any barriers that might arise over time. Subsidies from companies and public agencies help pay for transportation and child care costs.

Education benefits in a multitude of ways through this kind of economic development partnership. It adds another dimension to partnerships, improves access to instructional resources, helps improve the image of vocational education in the community, strengthens relationships with local agencies and gives schools a better eye on emerging job opportunities that can generate training needs.

In the Cincinnati area, for example, we're seeing a tremendous influx of plastics industries, and that means opportunities for Great Oaks to do training for their employees and for the high school students who will comprise the future workforce. If vocational-technical schools are in the business of workforce development, we must be in the business of economic development. We have to be able to train at any level if a vocational center is to serve the community well.

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With Project HIRE, we can show a track record for training viable employees and working with all available resources to achieve an economic development goal. One company is talking about moving a container plant to the Great Oaks region primarily because of the training opportunities. Managers were impressed that we had brought these groups together to reach out to a new kind of human capital. It is a good selling point for a new industry.

Collaboration between the public and private sector and vocational-technical education cannot be considered a superficial academic exercise. It must be viewed as an essential ingredient for the survival of the nation's economy, the workers in that economy and also the nation's educational system.

Partnerships between education and business must become a common function in any community. A quality educational enterprise needs multiple partnerships in which both sides contribute to developing a highly skilled workforce.

Chapter 2 (PART 2)

What's in It for Education:
The Postsecondary Perspective

By Gary Ballmann
Northern Virginia Community College

College graduates of the not-so-distant past found university doors engraved with opportunity. A higher education degree practically guaranteed a good-paying job, or at least a boost onto an upward-climbing career ladder. In more recent times, however, economic pressures and an abundance of collegians have rendered higher education more of an expectation than a golden key.

Today's students are more concerned than ever about the opportunities open to them upon graduation. Accrediting, governing and financing agencies are demanding that postsecondary institutions demonstrate that college and university programs provide effective pathways to employment. The demands for accountability from employers, student consumers and external agencies have heightened the postsecondary education community's awareness of the many roles business partnerships can play in enhancing educational programs.

Like many two-year colleges, Northern Virginia Community College (NVCC), a five-campus institution with more than 60,000 full-time students, has developed a wide variety of business partnerships. These include:

- advisory committees for occupational programs;
- educational opportunities in the workplace, such as apprenticeship programs, clinical internships and cooperative education;
- college membership on chambers of commerce, economic development agencies and other business organizations; and
- joint funding for future college growth.

Each of these partnerships has enhanced the ability of the college to make education more relevant and to prepare the workforce its communities need.

Responsive curricula

One of the most important functions that college-business partnerships provide is the constant linkage to the needs of the workplace. More than 400 employers serve on NVCC's 43 curriculum advisory committees. (See **Exhibit 2-2** for an explanation of the advisory committee procedures.) These resource peo-

EXHIBIT 2-2

COMMITTEE RESPONSIBILITIES

Curriculum advisory committees:

- Serve as a communication channel between NVCC and business and professional groups.
- Provide a means for the college to inform the community of curricula and specific courses and to improve public awareness of the high quality of these offerings.
- Advise in the evaluation of curricula and recommend such changes as necessary to keep these vital and relevant.
- Advise in the designing of courses and curricula by defining specific skills and essential knowledge related to a particular content area
- Advise in the formulation and evaluation of standards for entrance into programs of study when appropriate.
- Assist in identifying opportunities for faculty in-service training.
- Assess changes in labor market needs that may affect employment potential in current and proposed programs.
- Help the college place interns and provide cooperative education opportunities.
- Assist in placing graduates in appropriate jobs.
- Recommend personnel from business and industry as potential instructors.
- Identify prospective committee members.
- Assist in other matters when requested by the college.

MEMBERSHIP

The membership consists of professionals broadly representative of organizations in the community and industries with diverse experience and expertise within the related field. Membership also may include students and representatives from the general public. Members should be interested in and committed to excellence in education. When possible, the nine supporting jurisdictions in the northern Virginia region should be represented within the committee membership. The committee consists of not fewer than five members.

An executive secretary, appointed by the college division chair with responsibility for the program, serves as an ex-officio member of the committee. The division chairs, program heads and faculty from the given curricular areas serve as non-voting, ex-officio members of the committee. Other ex-officio members may be designated by the chair with concurrence of the committee.

PROCESS OF APPOINTMENT

Members of curriculum advisory committees may be identified by college personnel, NVCC Board members and/or present curriculum advisory committee members. The names of prospective members are sent to the academic division having primary responsibility for the curriculum. The executive secretary, in cooperation with the chair of the committee, contacts the prospective member to inquire of his/her willingness to serve and obtains the following information:

- Business address and telephone
- Home address and telephone
- Preferred mailing address
- Related work experience

(continued on next page)

EXHIBIT 2-2

All advisory committee members serve a three-year term that commences with their appointment by the president. A member may be asked to serve more than one term. It is recommended that most members serve no more than two consecutive three-year terms. However, in some circumstances where new members are not available, it may be desirable to have members who are willing to serve for more than two terms.

RESIGNATIONS

Members who are unable to fulfill their term of appointment should notify the executive secretary of their resignation from the advisory committee. The executive secretary then forwards this resignation to the associate dean for curriculum services, who notifies the president. Members who are unable to attend three consecutive meetings may be dropped from the membership roster.

MEETINGS OF THE ADVISORY COMMITTEES

Curriculum advisory committees must meet at least once a year and are encouraged to meet more frequently, especially when there are issues that require the committee's attention. The chair of the committee is responsible for establishing meeting dates, times and places.

Where possible, the committee should meet at the college so committee members can become familiar with the facilities used by the program.

ple meet at least once each semester with the college faculty to review the content of the college curriculum, identify emerging trends in the workplace and assist in the recruitment and placement of students. The college occupational programs also rely heavily on the advisory committees as sources for adjunct faculty. Having people with firsthand work experience in the classroom helps bring a "real world" perspective to education.

These ties to the work world help program faculty continuously revise course content to reflect the current needs and practices of business and industry. Up-to-date information guarantees student activities that simulate a real occupational scenario. And a network of business sources can be a pipeline for practical workplace experiences that complement classroom learning.

In some cases, the changes achieved through these employer-educator links have been dramatic. NVCC helped produce a new breed of versatile health-care technician after employers talked of the pressure to maintain quality care in a time of cost containment and staff reductions. They said they needed technicians with a foundation in one of the traditional technical specialties (nursing, respiratory therapy) and also a smattering of competencies across the specialties. In response, the Health Technologies Division at NVCC restructured all health care programs to include a core curriculum that crossed the specialties of nursing, health information and medical laboratory technology. It also designed post-associate degree certificates to provide current employees an opportunity to gain these broadened competencies their employer now demands.

This restructuring has been a boon for NVCC. It gains students as it serves the area's employers and workers, and the college also has improved placement opportunities for graduates through its newly tooled programs.

In other programs, curriculum refinements have been more subtle. Several college department heads have invited employees to the college to describe their job functions. These panels, which last from a few hours to two days, give educators an opportunity to compile a list of the duties, competencies, skills, knowledge and attributes the employees feel are important to their success. This list is then compared with the current curriculum so refinements can be made. Employers have been more than happy to allow their best employees time to attend these college panels to ensure that a well-trained workforce will be available in the future.

NVCC's administrative support technology program is one example of refinements crafted in a curriculum development panel. A panel of administrative assistants and executive secretaries defined many of the traditional management and office administrative competencies that were included in the college program. Faculty learned that most of the companies had significant international connections. These administrative support employees all were required to communicate effectively with foreign partners and to make international meeting and travel arrangements. In response, the college program integrated international communications and travel planning into the curriculum.

Business-Initiated Programs

Often business partners suggest new college programs and help support their creation. At NVCC, carpentry framing, pharmacy technician and biomedical electronics technician programs were started at the request of business representatives. In each case, the start-up costs were too great for the college to bear alone. To overcome that obstacle, employers have provided resources to facilitate the implementation of each program.

- The local home builders' association donated a van to transport students to building sites and provided tools for students and building materials for the first house completed by students in the carpentry framing program. Proceeds from the sale of that house and subsequent buildings have been funneled back into the program.

- Owners of retail and wholesale pharmacies subsidized a faculty position and equipment for a teaching laboratory so the college could open a pharmacy technician program.

- Several large health-care providers told the college that it took too long to train new biomedical electronics technicians on the job. These employees needed a sound electronics background along with some basic medical knowledge. Employers asked that the college initiate a training program in conjunction with its existing electronics program. They agreed to provide all the needed (and expensive) demonstration equipment and sites for field experiences. An employee of the National Institutes of Health helped write the program's curriculum and has continued to be the program's primary faculty member.

Employers and welfare agencies recently asked the college to initiate brief, entry-level programs (not more than six months) designed for people who have not had extensive college preparation or experience. The program will give students some basic college survival skills and take them through a sequence of college courses that will teach employability skills.

Two examples are the business information career studies certificate and the customer service career studies certificate. Both short programs have no prerequisites and include courses that can lead the student directly into areas where positions such as customer service representatives and data entry clerks are available. At the same time, the programs encourage continued career development through existing educational programs in various business fields. The results: the unemployed client is prepared for a job, the employer has a pool of qualified employees and the college attracts new students into existing programs.

These are just a few examples of NVCC programs started and supported by employers. The practice reduces the burden of lengthy on-the-job training for the employer and opens pathways for continued professional development at NVCC.

Creating More Competitive Graduates

Active and enthusiastic business partners often roll up their sleeves and plunge into the nitty gritty of classroom activities, offering their expertise directly to students. One outstanding example is NVCC's curriculum advisory committee for its communications design program. Eighteen graphic designers, owners of advertising and printing design companies and multimedia artists from publishing companies meet with college faculty four times a year. Two meetings are dedicated to the review of emerging technologies and techniques in the graphic arts. The other two meetings are used to motivate students and review their portfolios, the primary measurement of performance.

At a Saturday meeting in January, advisors join all students in a problem-solving exercise. The advisors devise a communications problem (one year, when President Bush was in office, the problem was "selling broccoli," the president's least favorite vegetable). Students work in teams to develop a solution for the problem. In the morning, they brainstorm approaches. Then they select a strategy and map out their solution graphically on "story boards," which they present publicly to advisors at the end of the day. Each team's work is critiqued by the pros. Students experience the rapid-fire processes of creating under pressure, as in the workplace. They also are challenged to work in teams, another real-world requirement. Finally, students get to hear how their ideas would be received by employers and their clients.

During the final advisory committee meeting, members evaluate the portfolios of graduating students. All communication design students are required to complete a thesis project.— a full communication campaign for a hypothetical business application. Advisors make awards in various categories, and the finest projects are selected for a public show. The critiques of these portfolios help the student gain confidence for the job search and expertise in presenting their strongest works.

This team effort has produced an excellent employment record for graduates, heightened awareness of the communications design program and its attributes in the business community and a constant connection to the needs of the workplace.

Targeted Scholarships to Increase Enrollment

Several curriculum advisory committees have established special scholarship funds for specific college programs. The horticulture program is one, in particular, that has enjoyed a high degree of success in attracting new students through scholarships supported by local landscape and nursery firms. When inadequate enrollment threatened the horticulture program, its advisory committee rallied employers from around the region to contribute to a scholarship fund that would encourage more students to enroll. The fund enabled NVCC to award 11 scholarships ranging from $500 to $1,000 (the full-time, in-state tuition for one or two semesters). Employers now routinely recommend that potential employees complete the program.

Funding for Faculty Positions

At a time in the 1990s when many states were experiencing major budget deficits, higher education in Virginia suffered large cutbacks in operating funds, forcing many institutions to eliminate faculty positions. In two cases, NVCC's linkage to the business community was so strong that employers contributed funds to retain faculty positions that otherwise would have been cut. The strength of this support from the business community convinced the college administration that the positions should be retained permanently.

Access to Current Equipment

Many programs have enjoyed donations of equipment that would have been too costly for the college to acquire. A striking example at NVCC is the partnership between the college's automotive technology program and several major automobile manufacturers, which have provided state-of-the-art computer diagnostic and emission control equipment. This equipment from business partners has made it possible to establish automotive certifications in several specialties.

Other programs have received donations of functional equipment that was being replaced by businesses. Most such equipment is highly desirable for basic training if it is close to the current industry standard. Students can learn the principles of routine operation and maintenance on the donated equipment. This knowledge offers a foundation that can be readily applied to the next generation equipment in use in the workplace. Some businesses also have allowed NVCC students and faculty to use their current high-tech equipment when the equipment is idle. In some cases, classes are held at the business site.

Workplace Training Opportunities

Mentored workplace experiences are an essential part of NVCC's health care program. In others, such as business education, a workplace experience is designed as a capstone in which students apply theoretical knowledge learned throughout the program in a practical setting.

To maintain a wide variety of experiences for students, the college must nurture partnerships with many businesses. Some programs have as many as 75 affiliated organizations that provide real-world experiences for college students. The employers must be committed to the college programs to allow their staff to work as one-on-one, on-site instructors and mentors for students. Because the student needs a structured experience in which he or she is guided through the real projects, the employee working with the student may not be as efficient as he or she might be when unencumbered. The employer must believe in the long-term benefits of an adequate supply of well-trained personnel.

Serving with business leaders

Administrative and teaching faculty from NVCC serve on a variety of business development organizations in the community. These college representatives join business leaders in area chambers of commerce, economic development agencies and other professional groups. This joint membership of educators and employers provides the college with an ear to and a voice in emerging workforce needs. The college representatives are able to explain their programs to the business community, and they also carry ideas for new areas of development back to the campuses.

Bringing private funds to higher education

Much of public postsecondary education has been dependent on private business benefactors to support the growth of their institutions. This is a relatively new experience for the two-year college sector, but it is growing in importance. At NVCC an educational foundation acts as an independent entity that raises funds for scholarships, educational program enhancement and construction of facilities that would not be funded by the state. The foundation has a board of more than 50 members, many of whom are area business leaders dedicated to raising funds from the various businesses and industries in the college's region.

Through the efforts of the foundation, NVCC has many scholarships targeted for students in specific programs. Donations also have supported the building of community cultural centers on each of the five campuses and the purchase of supplies and equipment for some programs. A grant from Mobil Oil, which is headquartered in northern Virginia, supports the college honors program. The foundation now is seeking funding for endowed academic chairs to bring noted authorities to the college from around the world. These guest faculty will assist in developing programs and presentations that enrich the college curriculum.

The college also has begun a venture with area health care institutions, secondary education systems and other postsecondary institutions to build a jointly funded Medical Education Campus, which will offer primary education from high school through graduate education and continuing education for current practitioners in many fields.

Improving general education

While the emphasis in the examples given has been on occupational programs and workforce development, the benefits of business involvement to many areas of broad liberal education should not go unnoticed. Business leaders want employees who are technically competent, but many of these competencies presuppose that the employee has good written and oral communication skills, mathematical abilities and a broad knowledge of the social and political implications of the work to be done. Just as higher education seeks to educate "the whole person," employers seek multidimensional employees who can offer their companies a wealth of insights, who are good citizens and who have rewarding personal lives. By staying in contact with the business community through the specific mechanisms dis-

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cussed in this chapter, the college also gathers information about how to better prepare students in all of these dimensions.

The examples of the ways in which the postsecondary education community benefits from partnerships with employers are intended to be a representative selection. Leaders at any postsecondary institution will be able to specify the types of ties their college or university has with the business community and the benefits of these relationships. As the role of higher education in economic development continues to grow, the linkages of educator to employer can be expected to strengthen. Every higher education institution finds these partnerships essential to its continued effectiveness.

Chapter 3

Recruiting Business Partners

By Barbara Nicol and Brad Carleton
Ohio Department of Education
AND
Julie Wallace
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As educators whose mission is to develop partnerships with business, organized labor and other agencies, we often are reminded of Charles Dickens' beginning to A Tale of Two Cities: *"It was the best of times, it was the worst of times." This paradox also applies to the process of developing education-business partnerships.*

It can seem like the worst of times if we believe that:

- The public has lost confidence in the educational system.
- Policy leaders are ignoring education.
- Education has limited financial resources to support system change.
- Societal problems, including drug abuse, are insurmountable obstacles.

But it can be the best of times if we realize that:

- Education reform is achievable.
- The environment is right for restructuring.
- The time is right to change the way to educate students.
- The time is right to make the leap from educational practices of the 1940s to education for the next century.

Making this the best of times means taking advantage of the expertise of business, industry, organized labor and public agencies through collaborative partnerships. But if educators are serious about partnerships, we must be ready

When Business Asks "Why?"

One of the first things a potential business partner will want to know is, "What are the pressing reasons for me to be involved in education now?" With this list, you'll be prepared.

1. **Business is education's largest consumer.** Many high school graduates go directly to work for these partners. Educators need to know their business "customers," value their knowledge and respond quickly to their needs.
2. **Business and industry personnel have expertise that needs to be incorporated into the educational system.** The global economy is a reality. Educators need to understand free markets, global economies, international competition and emerging philosophies of business management to prepare their students for success in the workforce.
3. **Business and education need to develop a mutual understanding of what each other does.** Education needs to become a greater part of the world of work by internalizing and modeling the philosophies of business leadership and best practices (e.g., teamwork, quality circles) used throughout industry.
4. **The success of individual students depends on the involvement of all.** Research shows that student achievement increases with greater involvement of the community. The ancient African proverb that "it takes a whole village to raise a child" applies here. Developing educational partnerships is one way to get the whole community involved.

Cultivating successful business-education partnerships may depend on recognizing an important factor: Business partners want to be *engaged* in the process, not asked to support pre-determined ideas and activities. (Too often educators have heard business say — and justifiably so — "I don't want to serve on this committee just to 'rubber-stamp' your ideas.") It becomes very clear very fast that a partnership must benefit each side.

to listen, cooperate and collaborate with business. To gain assistance and expertise from others, we must take risks and change our attitudes. We must be willing to share control, responsibilities and resources, and we must overcome resentment from some who perceive that sharing control means losing control.

Types of Partnerships

You can't recruit business partners until you're sure about the type of commitment you're after. There are many options. Business-education partnerships vary greatly, from top-level commitment to national and state policy formation to special services to a specific classroom or individual teacher. They may involve formal written agreements that outline in great detail the project or activity, the timeline and what each partner will do and receive. Or they may consist of a simple verbal commitment to do something as basic as speaking to a class.

The involvement of potential partners also will vary greatly, ranging from limited commitment to complex agreements. The type of resources that potential partners might provide also varies from human resources to training assistance or equipment use.

To sort the various levels of involvement in terms of commitment, impact and desired outcomes, the National Alliance for Business (NAB) has developed a method of classifying partnerships. The classifications enable educators to provide accurate information about the type of resources invested and the goals of the partners. They also provide a framework for organizing and developing partnerships at all levels of the educational system so that the partnership concept can be easily communicated to a variety of audiences.

Policy Partnerships

Policy partnerships are collaborations at the national, state or local level among businesses, schools and public officials. These partnerships shape the public and political debate, affect the overall direction of the educational system and bring about substantive changes in state or federal legislation or local school governance.

An example of a partnership that shaped policy is Ohio's "Future At Work: Beyond 2000." More than 500 stakeholders from business, industry, labor, education, government, community organizations and parent and student groups had direct input into the construction of this strategic plan, which establishes the direction and framework for state and local planning of vocational education.

Systemic Educational Improvement Partnerships

In partnerships geared to improve or change the educational system, leaders in business, education and the community identify the need for reform or improvement in the educational system, then work over the long term to effect major changes in the system.

The Columbus (Ohio) Public School system has such a partnership with the Kroger Company, which operates grocery stores across the country. The Kroger Career Academy began a learn-and-earn program in the fall of 1995. The employee union, company management, state education system, Jobs for Ohio's Graduates, community agencies and community leaders collaborated to create an innovative work-site program that:

- addresses development of occupational and employability skills,
- provides a high-tech classroom environment that supports passage of the high school proficiency test or attainment of a GED,
- stresses hands-on learning with Kroger Company employee-mentors and
- encourages continued education.

Other examples of systemic educational improvement include apprenticeship committees, pilot program task forces and school-to-careers and tech-prep consortia.

Management Partnerships

Management assistance partnerships support school officials with business expertise in a broad range of areas.

Ohio's Competency Analysis Profiles (OCAPs) are an example of a management level partnership involving businesses, trade associations and educators. OCAPs are industry-verified lists of competencies that reflect the occupational, academic and employability skills needed to enter a particular occupation. In the OCAP process, a draft competency list is generated from a nationwide analysis of jobs, then verified by a panel of about a dozen industry practitioners. The completed competency list then becomes the foundation for all vocational curricula across Ohio.

Additional examples of management partnerships include regional or local workforce development advisory councils, education subcommittees of civic groups and school or program advisory committees.

Teacher Training and Development Partnerships

In partnerships for teacher training and development, businesses provide opportunities for school personnel to update, upgrade or maintain skills or to learn about career opportunities, labor markets, workplace needs and community industries and businesses.

For example, the Educators in Business and Industry Program is a weeklong course co-sponsored by the Great Oaks Institute of Technology and Career Development in Cincinnati and the University of Cincinnati's Center for Economic Education. Business partners include Foxmeyer Health Corporation, Messer Construction, Wendy's Restaurants, Monsanto, Siemens Corporation, International Paper and the Colerain Township Fire Department. Participating vocational education partners include Butler County JVSD, Warren County Career Center, Southern Hills JVSD, Northwest Career Center and U.S. Grant JVS. Education participants in the program include elementary and high school teachers as well as counselors, building administrators and educational supervisors. This partnership program was developed to directly link education to business by expanding educators' awareness of the local economy and making them aware of employers' requirements for entry-level employees.

Other examples of teacher training and development partnerships include internships and mentoring opportunities for teachers, counselors and administrators; business-sponsored seminars, workshops or skill-upgrade clinics for educators; and industry newsletters, publications or association memberships sponsored by businesses for educators; and leadership training classes.

Classroom-Based Partnerships

In classroom partnerships, business leaders and volunteers from the community improve the learning environment either by bringing business or occupational expertise directly into the classroom for students and teachers, or by bringing the classroom to the workplace for on-site visits, job shadowing, apprenticeships or other school-to-careers programs.

An example of a classroom-based partnership is Team Cuisine, an intensive and prestigious competition showcasing Ohio's top student chefs. The competition allows culinary students to compete for scholarships and earn skill certificates. Teams of four students prepare and serve a four-course gourmet meal to a panel of certified chefs that critically evaluates students by rigid industry standards and a stringent set of criteria. Partners in this program include the Ohio Department of

Education, Ohio Restaurant Association, American Culinary Federation (Ohio chapters), Abbott Foods, Park Farms, Inc. and Ohio Edison Company.

Additional examples of classroom-based partnerships include industry personnel serving as temporary, short-term instructors for a specific unit of study; job opportunities for students (cooperative education, early placement, job shadowing, mentoring); and businesses hosting on-site visits, making presentations at schools, participating in career fairs and assisting with program recruitment.

In Kingsville, Texas, for example, staff from Spohn-Kleberg Memorial Hospital were invited to speak at the local high school on different components of the curriculum. Throughout the school year, the hospital sent a registered nurse to team teach with the health science instructor two days a week. Each week the nurse and the instructor were to write the next week's lesson plan for the health care science course.

Kingsville, Texas, police officers and school liaison officers taught "Introduction to Criminal Justice and Crime in America" to students enrolled in the high school law enforcement program at H. M. King High School. They supplemented the curriculum with real-life work experiences by taking students on visits to the county jail and communication center. Students also listened to presentations from drug counselors and from outside agencies including the FBI, fire department, police department and sheriff's department. The Kingsville Police Department and the school district each paid half of the total salary for both officers. The police officers took turns team teaching this course two hours per day, from 8 to 10 a.m. After the course was over, the officers monitored the middle school and high school campuses, especially during lunch hour. The results were two-fold: Students got to know the police officers in the classroom as role models and friends, and the officers got to know the students and understand their problems.

Sometimes business people and educators will decide that it would be more beneficial to students if courses are taught outside the school. "Computer Sea Camp" at the Texas State Aquarium is a good example. The partners involved in this project included The Texas State Aquarium, the Corpus Christi Independent School District, the Corpus Christi *Caller Times* newspaper, The Greater Corpus Christi Business Alliance and School Vision of Texas. For five days on site at the aquarium, 20 students, ages 7 to 12, conducted research at the exhibits and created presentations using multimedia technology (such as Hyperstudio) to incorporate photos and video clips. At the end of the camp, the student projects were placed on the Internet (through Corpus Christi *Caller Times* and School Vision) so that schools across the nation could discover what the students learned.

A staff member from the Greater Corpus Christi Business Alliance contacted each partner in the planning stages to coordinate this project. The school district loaned the aquarium 10 Power Macintosh multimedia computers for use during the camp. School Vision of Texas staff member Jeanette Cates wrote the curriculum for the camp and trained aquarium staff members. Aquarium staff conducted the camp with help from CCISD and School Vision. The Corpus Christi *Caller Times* gave the aquarium a site on their file server to store the students' Web home pages at no cost.

Special Service Partnerships

Special service partnerships are formed for a specific project, problem or need. Generally, these partnerships are short term and are confined to one school, one teacher or one class. Examples at this level include contributing equipment or providing industry personnel to serve as classroom presenters, tutors for individual students, role players for mock interviews or judges for skill events or competitions.

Schools can always use equipment and supplies, such as computers, mechanical tools and presentation materials. But avoid accepting severely outdated equipment from businesses merely aiming for a tax break for what they would have thrown away otherwise. What good does obsolete equipment do a school trying to teach students the realities of the workplace? The idea is to convince businesses to donate current equipment they know students must know how to use. This way they receive the tax break while doing their civic duty in a way that is much more beneficial to education programs. Businesses that can't donate new or "current used" equipment might still be willing and able to contribute funds to some type of scholarship program or equipment fund.

Getting businesses involved in this manner is a good way to get some much-needed resources, to increase the awareness of your program among local businesses and to make a good impression on businesses so that they might expand their involvement in the future. Of course, it is important that you make these businesses feel appreciated and provide them with appropriate acknowledgment.

For example, Spohn-Kleberg Memorial Hospital in Kingsville, Texas, donated furniture, supplies and equipment so that a mock "hospital room" could be created at the school (in a classroom office that had been used for storage) for the health occupations program. McDonnell Douglas Aerospace, along with the U.S. Navy, donated various pieces of training equipment to the avionics program at H.M. King High School throughout the school year. In fact, when the TAJ4 Skyhawk was replaced by the new Goshawk aircraft, the Navy, through the National Museum of Naval Aviation at Pensacola, Florida, loaned to the high school one of the older jets for aircraft maintenance training purposes — one of the only times in history that a United States high school had a Navy jet in its aircraft maintenance hangar.

Selecting Partners

Education and career training programs should be based on the labor market needs and economic development goals of the community and region. You can determine these needs and goals with a comprehensive study of labor market information from local employment agencies, economic development corporations, chambers of commerce and state agencies. The chamber's economic outlook report for your city can contain valuable information about the workforce and employment needs.

With your area's labor market needs in mind, you can start to search for potential partners who can help you fill those needs and plan educational programs.

First, have your school district join the chamber of commerce, and then indicate your interest in becoming a member of its business/education committee.

Some Do's and Don'ts to Ensure Successful Partnerships

Do's

- Do make a commitment to the partnership for at least one year
- Do involve the school superintendent and business CEO in the initial phases.
- Do understand that the main goal is to enrich the educational environment and prepare young people for the world of work.
- Do have clear objectives and evaluation procedures.
- Do include faculty, students, management and labor in projects and goals.
- Do incorporate efforts already in progress.
- Do open doors to each other to investigate and learn from your different environments.

Don'ts

- Don't make promises you can't keep.
- Don't begin the partnership without mutual respect and commitment to the program.
- Don't view the partnership as a recruitment scene for business, as a method of obtaining money for the school or as a public relations stunt for either institution.
- Don't enter a year without plans, and don't finish the year without a "report card".
- Don't make the advisory committee too large.
- Don't treat partnerships as "add-on" projects, creating more work for already overburdened school and business personnel.
- Don't view this as a method of scrutiny to find fault with the school system or the business world.

There are few better ways to rub elbows with potential business partners, especially those who have already established their interest in education. Also, begin paying attention to the membership of other committees, boards and planning groups in your community to determine who the decision makers are.

Ask your chamber of commerce for a list of its member companies, along with the number and types of employees they have. Also ask for the names, addresses and phone numbers of CEOs. You might be able to purchase a list of the chamber's membership to give you a clearer picture of the employers/CEOs in your community. Be sure to make a list of local museums and other educational attractions, schools and other entities that might be possible partners, too.

The chamber also may be able to provide a list of your community's service organizations — the Rotary Club, Kiwanis, Lions Club and the like. Most service organizations include representatives from various professions throughout the community. They provide outstanding opportunities for educators to network with business and industry representatives. These organizations normally meet weekly and host programs concerning every aspect of the community. Call each organization's president and ask to make a presentation on your programs. Also, let members of each of these service organizations know that you are interested in being invited to join their group.

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Making Successful Contacts

Many businesses are eager to assist in worthwhile community efforts such as partnerships with education — especially when they receive even more benefits than positive public relations, as businesses do when they participate in school-to-careers programs. If you are unsure that they will be interested and cooperative, you will most likely be in for a pleasant surprise. You just have to take that first step and contact them.

"Don't be shy about contacting businesses," says Brent Stephens, plant manager for Hoechst-Celanese Corporation, the largest employer in Kingsville, Texas. "After all, most businesses recognize that partnerships with education are in their best interest, and most companies are looking for that "committed someone" to help them identify ways to join in."

Asking for the right person is essential. Call the head of each company and introduce yourself. Make an appointment to meet with the plant manager or CEO at his or her earliest convenience. By meeting with the person who has the most decision-making power, you can avoid many of the pitfalls in developing partnerships.

You also should invite the decision maker to visit your program site. This helps make the unfamiliar familiar, which is especially important in overcoming the reluctance that often accompanies doing something that hasn't been done before. Hosting the meeting at your school allows you to give the CEO a tour of your facility and to meet people who will be involved with the program. A site visit can eliminate any initial hesitation or even negative perceptions that the CEO might have about such programs.

Calling on businesses can be a tedious, frustrating task. The first step—finding an appropriate and responsive contact—can be the hardest. Use the chart in **Exhibit 3-1** as a guide.

If you have not made initial contact with a potential business partner at a community meeting or social event, the "cold call" is another option. Conversation ensues more naturally in person, but if you must make the cold call, try opening with something like this: "Hi, I'm Sally Jones, an electronics instructor at Wayne County High School. We're committed to teaching employability skills to all students. I'm calling to ask if you might meet with a group of educators at our high school to discuss ways to make our curriculum more meaningful to students and more relevant to businesses."

This is an invitation that many businesses will accept because it allows them to become directly *involved and engaged* in helping educate their future employees. So when your contact responds positively, you can then say, "Great! Let's set a date to get together."

Eureka! You have made a successful contact! And all that you have requested is the opportunity to discuss a better way of teaching employability skills. You have made no mention of any contribution (yet) or any long-term commitment (yet). In fact, the carrot that dangles before Widgets Incorporated is something that the company probably wants and needs — potential employees with valuable skills.

EXHIBIT 3-1 LIAISONS AND CONTACTS

Education Liaison	*Business Contact*
TYPE 1: POLICY	
• Superintendent • Board of Education	• Chief Executive Officer • Executive Staff • Association Leadership • Labor Leadership
TYPE 2: SYSTEMIC EDUCATIONAL IMPROVEMENT	
• Superintendent • Board of Education	• Chief Executive Officer • Executive Staff • Association Leadership • Labor Leadership
TYPE 3: MANAGEMENT	
• Superintendent • Board of Education • Principal/Director	• Executive Staff • Association Leadership • Labor Leadership
TYPE 4: TEACHER TRAINING & DEVELOPMENT	
• Principal/Director • Vocational Supervisor • Tech Prep Coordinator • Academic and Vocational Teachers	• Mid-Managers • Specialists, Technicians • Association Representatives
TYPE 5: CLASSROOM	
• Vocational Supervisors • Job Placement Coordinator • Career Education Coordinator • School-to-Work Coordinator • Counselors • Academic and Vocational Teachers	• Individual Employees • Association Members • Members of Labor Unions
TYPE 6: SPECIAL SERVICE	
• Academic and Vocational Teachers	• Individual Employees • Association Members • Members of Labor Unions

Resources for Further Information

Numerous organizations can serve as a starting point for information. The local chamber of commerce or economic development office can assist with contacts. Also, each local affiliate of Rotary International has a vocational service committee that may be able to describe available opportunities and a history of involvement with school systems. In addition, a search on the Internet can provide a vast amount of information, both about companies and about educational programs.

The following national organizations can dispense information on a broader range of partnerships and provide the name(s) of appropriate local contacts.

American Vocational Association
1410 King Street
Alexandria, Virginia 22314
703-683-3111; 703-683-7424 (fax)

Association for Supervision and Curriculum Development
1250 N. Pitt St.
Alexandria, Virginia 22314-1403
703-549-9110; 703-549-3891 (fax)

National Alliance of Business
1201 New York Avenue NW
Washington, DC 20005
202-289-2888

National Association of Partners in Education
209 Madison Street, Suite 401
Alexandria, Virginia 22314
703-836-4880

National Employer Leadership Council
1001 Connecticut Avenue NW, Suite 310
Washington, DC 20036
202-822-8027; 202-822-8026 (fax)

Chapter 4

Nurturing a Budding Partnership

What To Do When a Business Says Yes

By Barbara Nicol and Brad Carleton
Ohio Department of Education
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Julie Wallace
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When a business becomes interested in forming a partnership and begins to discuss real plans, the "recruitment" of that business isn't finished. Until the partnership actually is up and running, the business partner might hesitate to become involved and even decide to postpone its commitment or drop out. Without being demanding or forceful, you must continually offer assistance and emphasize the benefits of a collaborative venture.

Planning

Once you have captured the interest of the decision maker, you can begin to work on the details of the partnership.

Keep all partners informed of your thoughts and project developments. Get to know the work styles and preferences of the partners so you will best know how to communicate with them. If it is difficult to "sense" this information, ask. Some may prefer personal contact while others may want direct phone, voice mail, electronic mail or written updates. The frequency of partner contacts may vary as well, but the frequency of project meetings should be determined by all the players at the first or second meeting.

During the planning stage, the number of partners involved may well expand from the one or two "dreamers" who conceptualize a partnership to perhaps 10 who will develop it. Beyond 10 partners, the group may bog down in unnecessary implementation details that are best left to those who will become the worker bees of the partnership.

The planning group, particularly for partnerships at levels one through four, is generally composed of company and school officials in administrative or managerial positions and representatives of labor organizations, all of whom have the interest and authority to invest in a partnership. The time required to develop partnerships at levels five and six may involve classroom teachers and an accompanying business partner. The planning stage for these levels is minimal. **Exhibit 3-1** on page 35 of the previous chapter provides a list of potential members of a planning group. Realize that these people may choose to delegate planning activities to another associate.

Meeting sites for a planning group could be anywhere—a school conference room, a corporate board room, training room or a community room in a local hospital, a public library or a chamber of commerce facility. Be flexible in selecting meeting sites and be certain that they are convenient to the partners. Be willing to meet at a partner's workplace. Do not always meet in the same place. Let the partners get to know each other's culture and environment by meeting on each other's "turf."

Here are some tasks that must be handled during the planning stage:

- Assess one another's needs and abilities to help.
- Develop a collaborative mission statement and goals.
- Identify resources each partner will bring to the partnership.
- Plan strategies, activities or projects.
- Discuss how to recruit, orient and train volunteers for various tasks and activities.
- Determine how various activities will be implemented.
- Establish project timelines for accomplishing activities.
- Determine how activities will be evaluated.
- Determine how to promote the partnership to various groups — students, other educators, other businesses, local officials and the community in general.

You'll want to ask about the employer's needs for skilled workers now and for the next three to five years. Prepare a "white paper" or list of "bullet points" that address what you want from the company as well as what you, the educator, will provide to the business. Include a preliminary document outlining specific needs and potential resources (including financial) required from each partner.

The checklists shown in **Exhibit 4-1** and **Exhibit 4-2** help potential business partners determine the role they want to play in shaping vocational and adult education. You can send a copy of the exhibits to industry personnel who have agreed to a meeting and ask that they complete them beforehand.

EXHIBIT 4.1 BUSINESS PARTNERS CHECKLIST

DIRECTIONS: As you assess the mission and goals of the company, use the following checklist as a guide to determine how and where your organization wants to be involved in shaping school-to-careers education.

______ Effect change in the education system
______ Improve student achievement and self-esteem
______ Enhance instructional support
______ Enrich the learning environment
______ Promote career awareness
______ Provide material or financial support or human resources
______ Strengthen school-community relations
______ Influence policy
______ Strengthen the educational management system

1. In what ways does your business, industry or labor organization want to be involved with the educational system?

Administrative Level

______ Regional
______ State
______ County
______ Local

Educational Level

______ Adult (continuing education/job training)
______ Postsecondary (college)
______ Secondary (junior high and high school)

2. On what level(s) within the educational system does your organization want to be involved?

3. With what group can your organization have the most impact?

______ Administrators
______ Counselors
______ Teachers
______ Parents
______ Students
______ Other ______________________________

4. How much time does your organization want to contribute to the partnership? Consider the number of hours you are willing to devote to partnership activities.

(Hours)

________ Annually
________ Monthly
________ Weekly
________ Daily

5. With what project/area/activity does your organization wish to be involved?

________ Classroom activities including building curriculum, teaching, speaking
________ School-based training activities (*specify* ______________________________)
________ Work-based training activities (*specify* ______________________________)
________ Program advisory committee membership
________ Career development activities
________ Student recruitment
________ Mentoring for students or for a class
________ Assessment and documentation of student skills
________ Vocational student organization (VSOs) activities
________ Other ______________________________

BEST COPY AVAILABLE

EXHIBIT 4.2 WHAT HOW AM I ABLE TO CONTRIBUTE?

DIRECTIONS: Now that you have begun to focus your thoughts on being involved in school-to-careers education, the following list of activities may help you determine specific contributions your organization can make to the educational system.

1. Effect Change in the Education System

________ Participate in business roundtable discussions (local and regional)
________ Participate on school or program advisory committees (local and regional)
________ Sponsor teacher employment in industry
________ Provide management training to educators
________ Provide an executive on loan to the school

2. Improve student achievement and self-esteem

________ Tutor in subject areas for remediation or enrichment
________ Provide specific skills training
________ Judge or sponsor a specialized contest (such as a speech or skills contest)
________ Provide a specialized incentive program (such as for reading or math)

3. Enhance instructional support

________ "Team teach" with the vocational or academic teacher
________ Help develop industry-based lesson plans or curriculum (such as for math, science, communications or for specific occupational skills)
________ Provide scholarships for teachers who want to pursue advanced study in their field
________ Sponsor awards for outstanding teachers
________ Establish telephone "hot lines" for students
________ Sponsor school clubs and groups
________ Sponsor staff development activities
________ Sponsor parent activities
________ Sponsor staff internships (paid and unpaid)
________ Host workshops, conferences, seminars

4. Enrich the learning environment

________ Provide work-based technical training
________ Provide school-based technical training
________ Provide other work-study experiences
________ Provide tours and field trips for students
________ Offer structured visits of your facility for educational staff
________ Provide staff as guest speakers, lecturers, demonstrators
________ Serve as a cooperative education site
________ Sponsor special assemblies, fairs, events
________ Set up resource centers in schools
________ Host science fairs
________ Sponsor writing programs or competitions
________ Support and help create schools or courses in special subject areas

5. Promote career awareness

________ Provide shadowing opportunities
________ Provide mentors for students
________ Provide career day programs and fairs
________ Provide student internships (paid and unpaid)
________ Discuss careers and hobbies with students

EXHIBIT 4.2 WHAT/HOW AM I ABLE TO CONTRIBUTE?

6. Provide resources

________ Scholarships, awards and incentives
________ Fellowships for teachers
________ Aides and volunteers for the classroom and other activities
________ Employee to help judge student competitions
________ Equipment (new and used)
________ Materials (donated and underwritten)
________ Leaders or advisors for clubs and organizations
________ Consultation services to schools
________ Bus transportation to and from student activities
________ Printing services for schools (brochures, flyers)
________ Coordinate mailings for schools
________ Grants for teachers
________ Sponsor competitions for students
________ Sponsor administrative retraining programs
________ Establish education foundations and trust funds

7. Strengthen school-community relations

________ Promote school-community service in the area
________ Provide facilities for activities
________ Sponsor anti-vandalism programs
________ Display student-made projects and displays in your workplace
________ Sponsor school pride programs
________ Host events for partners
________ Participate in holiday/social events
________ Sponsor community-wide citizenship programs
________ Sponsor leadership programs for students
________ Sponsor volunteer recognition within the community
________ Sponsor awards programs for school and company partners
________ Provide activities/jobs during vacations and breaks for students and teachers
________ Promote/advertise educational successes within the community

Ask the potential business partner to bring to the meeting a list of needs and goals that are compatible with its internal mission and corporate policies. Be prepared to show the business how education can help achieve its needs. You also must bring a list of education's needs so the two of you can start to see how you can help one another. The realization of mutual needs and goals can lead to a deep discussion and the development of a partnership.

The process of planning and developing educational partnerships is time consuming and requires excellent organizational skills. It is generally assumed that the person who recruits partners must assume the lead for planning and developing the partnership. It takes an organized person to track progress and promote outcomes. It will be up to this person to plan and schedule meetings (we suggest keeping a logbook or weekly planner for the partnership), to keep the meetings focused and on track, to maintain a record of activities and to be certain all partners are involved. It will take your best interpersonal skills to be certain that the partnership meets the individual and organizational goals and expectations.

Plan every activity carefully, even those that seem basic, like field trips. To demonstrate, we've included **Exhibit 4-3** to show how an organized group leader would detail a field trip. Once partners have determined mutually acceptable dates, you should mail a schedule to everyone, including the school administrative staff, the course teacher, parents/students and company employees who will be involved or affected.

EXHIBIT 4-3: SAMPLE FIELD TRIP SCHEDULE

Field Trip Name	*Location*	*Date(s) (all 1996)*
Power Plants	McDonnell Douglas	2/24
Hydraulics & Avionics	McDonnell Douglas	3/31
Human Resources Brief	H.M. King High School	4/10
Mock Interviews	McDonnell Douglas Offices	4/11
Safety/Hazard Indoctrination	H.M. King High School	4/12 and 4/13
Internship	McDonnell Douglas	4/18 thru 5/25

Implementation and Management

As you and your partner progress from planning to actually implementing and managing the partnership, keep in mind the catchy advertising slogan of the Nike Company: "Just do it." Although the initial efforts might not be perfect or totally efficient, they will be better and more productive than not doing anything at all. As the partnership progresses, you can (and most likely will) modify plans and goals — in fact, one of the principles of continuous improvement models is that incremental adjustments must be made. In most cases, you and your partner will learn as you progress, but that is certainly acceptable for educational professionals who promote lifelong learning.

During this stage, each strategy or activity in the plan has to be monitored—and that means someone or some group has to be responsible for each task. An oversight body or committee guides the overall process by directing and helping the people charged with each task. This oversight body is likely to be the planning committee, which by now meets less frequently but can provide some encouragement, coaching or resources and holds the implementation group accountable for activities.

For example, one activity of the partnership may be to provide recognition to the partners at the culmination of the project. The person responsible may need some help enlisting the support of the media to develop a news story for the local TV station. The oversight body may have a relationship with news reporters and be able to call the local TV station to pitch the idea. The oversight body also may see to it that expenses such as paper, printing and distribution are taken care of, or it may supply a consistent meeting location for those who implement and manage the project.

It is helpful to maintain a database of partners (both present and potential) and their levels of interest and partnership. Note additional information such as each partner's corporate mission and goals and the desired level of involvement with the educational system. With this database, you can track the contributions of time and resources to school districts — all of which can be used in evaluations.

Evaluation

To evaluate the partnership, conduct formal or informal surveys or focus groups with all stakeholders and customers during and after activities so that all partners can make plans to shape and improve future activities. "Formative" evaluations, or pulse checks, provide critical feedback as the activity progresses so partners can make changes in mid-stream if they have to. "Summative" evaluations allow partners to gauge the success of the partnership at the end of an activity or short-term partnership. To be thorough, evaluation surveys should seek input not only on satisfaction but also on the level of participation, time commitments, resource investments and the like. A sample evaluation form is shown in **Exhibit 4-4.**

EXHIBIT 4-4 PARTNERSHIP EVALUATION FORM

NOTE: All or parts of the following evaluation form may be used at different stages of the partnership. As always, the statements should be modified according to the tenets of the partnership. The results can be graphed used to build a run chart to measure the progress of the partnership.

KEY:

5 = Strongly Agree
4 = Agree
3 = Neutral
2 = Disagree
1 = Strongly Disagree

1.	A mission statement was mutually developed.	5	4	3	2	1
2.	The needs of the partners were well defined.	5	4	3	2	1
3.	The goals of the partnership were measurable.	5	4	3	2	1
4.	The goals of the partnership were achievable.	5	4	3	2	1
5.	The goals of the partnership were well defined.	5	4	3	2	1
6.	The return on investment was reasonable for all partners.	5	4	3	2	1
7.	The partnership provided value added activities for all.	5	4	3	2	1
8.	Shared responsibilities were the trademark of the partnership.	5	4	3	2	1
9.	Partnership meetings were productive.	5	4	3	2	1
10.	Partners received equal recognition.	5	4	3	2	1
11.	The partnership met my/our expectations.	5	4	3	2	1
12.	All partners participated in the activities.	5	4	3	2	1
13.	My personal time commitment to this partnership was reasonable and manageable.	5	4	3	2	1
14.	All partners committed resources to ensure the success of partnership activities.	5	4	3	2	1
15.	The partnership benefited everyone involved	5	4	3	2	1

As part of your continuing efforts to promote the partnership, announce the results of these surveys and the plans based on them to the community. Also, give special recognition to participants whose contributions really made a difference.

You also can evaluate your partnerships by learning about other partnerships and the "best practices" they employ. Perhaps you can replicate all or parts of those practices. By talking to others and sharing information at conferences and in articles published in professional journals, you can generate creative ideas to improve your partnerships.

Promotion

Promoting the partnership is an essential and continuing process. You need to promote it directly after the planning stage — even before implementation. Promoting it early makes instructors and students aware of the opportunities the partnership will present. After the program is in place, and for as long as the program is operating, you must promote it constantly, especially emphasizing each milestone, evaluation or recognition event.

20 Ways to Promote a Partnership

1. Be enthusiastic about the partnership and be willing to explain it to others at a moment's notice.
2. Develop a flyer or fact sheet about the partnership to explain it to others.
3. Promote the partnership and recognize the partners in an article in the local newspaper.
4. Write letters of congratulations and appreciation to individuals involved in the partnership.
5. Contribute articles to a company newsletter.
6. Develop a videotape to promote partnership activities.
7. Develop a display featuring the partnership and the people involved.
8. Present recognition certificates to individuals and award plaques to businesses. Present these awards at a company function.
9. Recognize corporate partners in the local chamber of commerce newsletter and in statewide publications.
10. Promote the partnership program at a state or national education meeting or at a major professional association conference.
11. Be available for interviews with the local radio or television station.
12. Incorporate a "partnership update" feature as a continuing item in the school-community newsletter.
13. Develop a partnership directory.
14. Plan a breakfast, luncheon or reception to host potential partners and explain the existing programs.
15. Place photos of partnership activities in the school yearbook.
16. Use photographs of partnership activities in posters for display in the community.
17. Start a resource corner in the business's library for partnership guides, manuals, directories.
18. Send thank-you notes immediately and frequently to partners.
19. Provide a quarterly update to school board members and the company board of directors.
20. Say "thank you" — often!

After the partnership projects have been completed, appropriate recognition of the partners, teachers and students should become a priority. Educators should work closely with company or government public affairs offices to decide on appropriate marketing or promotional techniques. For example, when the Navy loaned its jet to H. M. King High School in Kingsville, Texas, public relations specialists with the Navy and with McDonnell Douglas Corporation co-wrote press releases and articles and supervised photography.

Presentations at regional, state and national educational conferences are good ways to share information about successful partnerships, and they are made more effective with use of video and computer multimedia software. This requires some thinking ahead. Company CEOs and supervisors can help coordinate videotaping of student internship activities along with important meetings throughout the school year.

Multimedia software such as Apple Video Player captures these videos in either pictures or video clips. Presentation software such as Adobe Persuasion or Microsoft Powerpoint can be used to wed text, charts and graphs, pictures and video clips into a sophisticated promotion. If you use a computer and projector or LCD panel to project the presentation to a large audiences, make sure that external speakers are used so that the audience can hear the video clips or movies.

Brochures

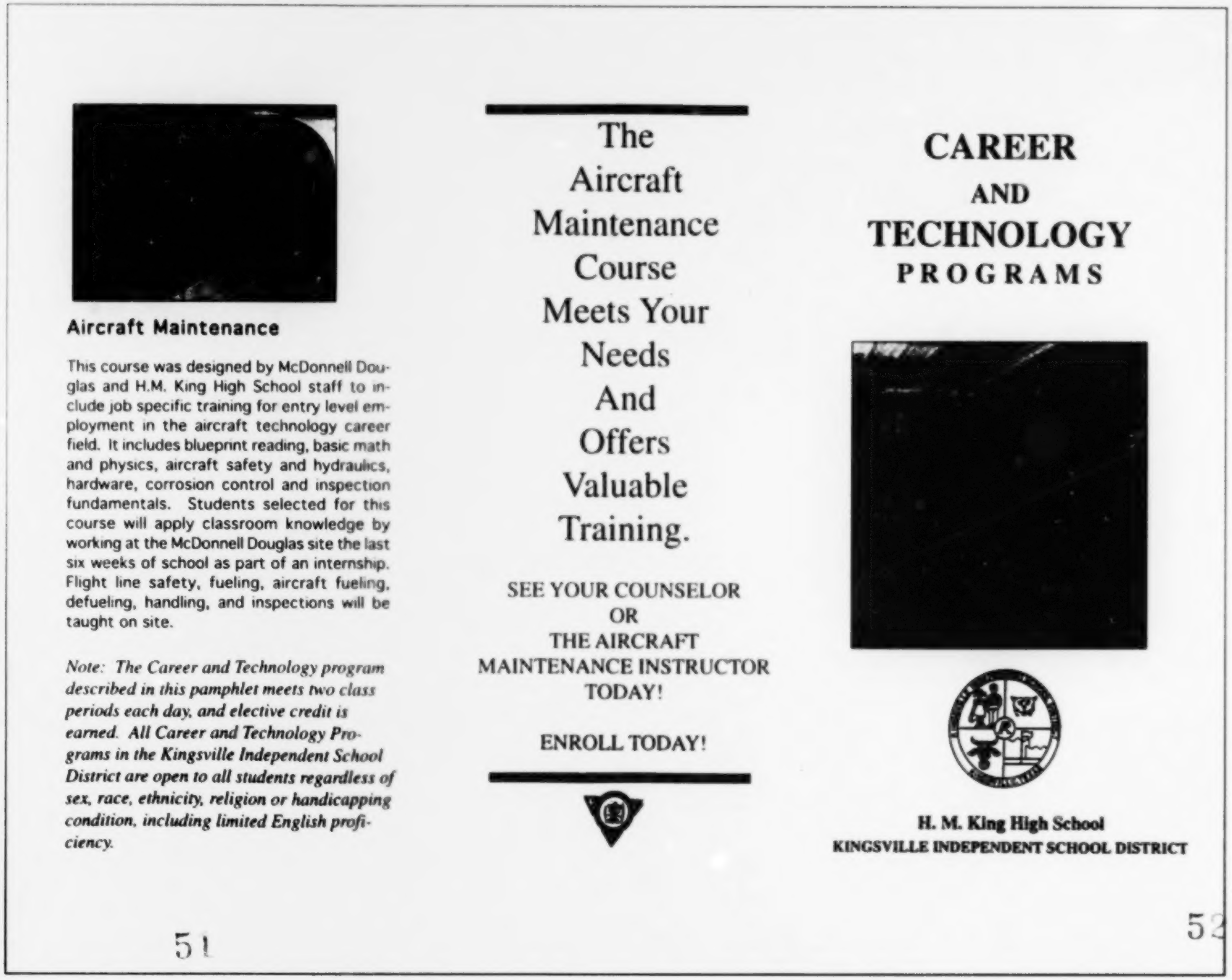
The pictures you've taken throughout the year for presentations can do double duty as fodder for brochures that you can create with software such as Adobe PageMaker or Quark XPress. The brochures should include a list of the course offerings for each program along with their benefits to both the employer and student. **Exhibit 4-5** shows an example of a brochure. These photos also can be sent to local newspapers.

Presentations and Banquets

Make presentations at all the major curriculum conferences in your area. Market your program to a variety of audiences including the school board, students, parents, other business people and the community at large. Enlist the help of the chamber of commerce to host town meetings, chamber of commerce board presentations and radio and television talk shows.

Host an end-of-year banquet to acknowledge and honor your partners. Recognizing their efforts is a valuable way to keep them enthused about the program and apprised of its successes. The partners might offer their meeting room to host the banquet or share in the printing, mailing and decorating costs.

EXHIBIT 4.5 SAMPLE BROCHURE



Aircraft Maintenance

This course was designed by McDonnell Douglas and H.M. King High School staff to include job specific training for entry level employment in the aircraft technology career field. It includes blueprint reading, basic math and physics, aircraft safety and hydraulics, hardware, corrosion control and inspection fundamentals. Students selected for this course will apply classroom knowledge by working at the McDonnell Douglas site the last six weeks of school as part of an internship. Flight line safety, fueling, aircraft fueling, defueling, handling, and inspections will be taught on site.

Note: The Career and Technology program described in this pamphlet meets two class periods each day, and elective credit is earned. All Career and Technology Programs in the Kingsville Independent School District are open to all students regardless of sex, race, ethnicity, religion or handicapping condition, including limited English proficiency.

The Aircraft Maintenance Course Meets Your Needs And Offers Valuable Training.

SEE YOUR COUNSELOR
OR
THE AIRCRAFT
MAINTENANCE INSTRUCTOR
TODAY!

ENROLL TODAY!

CAREER AND TECHNOLOGY PROGRAMS

H. M. King High School
KINGSVILLE INDEPENDENT SCHOOL DISTRICT

BEST COPY AVAILABLE

Directories

To promote partnerships, many communities or school systems publish guides and directories, such as a School-Community Resource Guide or a Business-Education Partnership Directory. Directories commonly are developed through the career education, tech prep, school-to-careers or school-community relations coordinator. Directories often include the following information:

- Descriptions of the partnership activities.
- Names and addresses of businesses involved.
- Names of contact people.
- Telephone and fax numbers.
- Types of occupations included in the curriculum clusters and work experience sites.
- Number of students involved and their grade levels.

ADDITIONAL BENEFITS OF DIRECTORIES

For Business

- Promote services to potential customers.
- Promote available career opportunities to potential employees.
- Promote a good public image by showing their involvement in the community.

For Education

- Provide information about learning resources available in the community.
- Help teachers and students appreciate the role of business in the economic system and the skills, responsibilities and values required.
- Bring the school and community closer together by making education programs more relevant to the work world and helping the community develop a better understanding of school programs.

Accessibility is the key to the success of directories. Administrators and teachers find them invaluable resources for appropriate curriculum-related activities. Businesses use them to help match their needs to the needs of the education system. Directories also can be a tool for recruiting new business partners — they can see how their efforts will be publicized.

Promoting to Everyone

In your promotions, be sure to explain how everyone benefits through well-designed, effective collaboration between businesses and schools. **Exhibit 4-6** lists benefits for all potential partners, from business and education to students,

EXHIBIT 4-6 EVERYONE BENEFITS

Business and Industry

- Contribute to the development of human resources
- Discharge their community responsibility more effectively
- Get the best possible return on their education tax dollars
- Reduce on-the-job training time
- Increase equal employment opportunities
- Build employee morale through involvement
- Enhance the business's image in the community
- Enlarge the pool of well-prepared potential employees
- Encourage more informed public policy decisions affecting business
- Communicate the expectations of the business and employment world
- Gain direct access to and understanding of the school system

Students

- Become better informed consumers and better prepared employees
- Understand how basic skills are used in business
- Learn about career choices
- Receive enrichment beyond the capacity of school curriculum
- Learn about the free enterprise system
- Gain valuable adult role models
- Interact with working adults and better understand demands of different careers

Teachers and Schools

- Become alert to the gaps between expectations of business and the skill competencies of their students
- Gain expertise that helps provide up-to-date instruction
- Become aware of business views
- Are challenged by new ideas
- Receive support and recognition for their efforts
- Improve school and program operations with management tips and technical assistance

Parents

- Gain a more comprehensive understanding of career-related information and sources
- Become better informed about their children's career and educational options
- Interact more purposefully with their children to influence better career and educational planning

Communities

- Improve quality of life for residents
- Enhance community stability with a better-prepared workforce
- Contribute to higher, more stable employment
- Promote a healthier economic climate

parents and the entire community. These items can be used in recruitment flyers, posters and informational print materials, and they can serve as a springboard for discussions with potential partners. After seeing all these potential benefits, many people and groups will become excited about being involved.

Committing to Quality Education

Business and community members must encourage the sharing of commitment to quality education for all students — children, adolescents, young adults and older adults. All partners must continue to design and implement continuous quality improvement methods that are focused on customers and driven by results. By uniting desire, commitment, accountability, methods and process, we can achieve success for all.

Business-education partnerships promote more than vocational-technical education and career learning. They also provide an example of how to maximize lifelong learning and personal growth opportunities. The whole community must commit to the growth and development of its children and grandchildren. For everyone's sake, a community should do all it can to encourage and develop dynamic partnerships to keep lifelong learning and the school-to-careers efforts moving forward.

Partnerships can make a difference. First we all must accept responsibility and do our part — get involved, offer to help, reach out to others who can provide experience and expertise, be willing to commit, be willing to change and be willing to work.

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Afterthoughts

Every organization has four kinds of bones:

- **WISHBONES** who spend their time wishing someone else would do it.
- **JAWBONES** who do all the talking but little else.
- **KNUCKLEBONES** who fight and oppose everything anyone ever tries to do.
- **BACKBONES** who get under the load and do the work.

Chapter 5

Involving Business in Curriculum Development:

What's The Reality?

By Ellen D Wernick

Simply enough, a curriculum sets out the content and progression of a course of study. The objective in curriculum development is to think through what needs to be learned, how that learning must be sequenced and assessed and how the schools can be organized to ensure that learning occurs.

School-to-career systems, however, offer up a bit of a challenge to curriculum developers. They require educational road maps that integrate academic and occupational skills, make room for work-based learning, move students smoothly from high school to further education and emphasize the broader qualities that enable them to get and keep jobs.

That's a tall order. Educators can't do it alone. Nor can employers, who don't have the time or the expertise to train the well-rounded individuals they require. It is not enough, though, for both sides merely to recognize their mutual need and set up some token semi-annual meetings. Successful partnerships in curriculum development require the equal input of business and education from the start, and the effort must be sustained through what can be some very long and tedious meetings.

Business representatives and educators who work together on curriculum development are concerned with some or all of the following issues:

- Identifying current and future employment needs.
- Determining what academic, employability and occupation-specific skills and knowledge are needed to ensure that graduates' skills pass muster no matter where they choose to work.
- Deciding the organization, content, and instructional techniques for teaching those skills and knowledge.
- Developing instructional materials and locating equipment to support the curriculum.
- Providing in-service training opportunities for teachers.

- Providing structured work-based learning and developing learning plans that tie in with this on-the-job training.

This chapter looks at the "whos" and "hows" involved in ensuring that students gain the academic, employability and occupation-specific skills they need to enter jobs or colleges. It first examines the areas in which business involvement is most critical and then suggests a flexible process for determining what information should be taught to students and how that information can be delivered.

Levels of Contact

Because American schools are funded mostly with local tax dollars, they are designed with local needs and resources in mind. This local level is perhaps the most common point of contact between business and education. It is logical for local employers to have an interest in supporting their community's schools. But if we are to fully prepare students to meet the requirements of the workplace, it is neither efficient nor effective for local partnerships to work in isolation from regional and national standards and strategies.

A second point of contact is at the state level, where education department employees guide development of curricular frameworks that identify the common cores of knowledge expected to be taught within schools in that state. These frameworks may be mandated or offered as guides, depending on the state. Here, too, business partners are involved as advisory committee members. At an earlier stage, they may have been influential in shaping legislative mandates.

At the national level, businesses get involved in the big picture. National organizations are likely leaders in development of common skill standards and helping educators understand "all aspects of an industry" for which they must prepare students.

In most cases, school systems take the lead in making contact and involving businesses in the curriculum process. However, once a good working relationship has been created, local businesses often initiate the development of a new instructional program for the curriculum, as is happening in St. Mary's County, Maryland, for instance. Similarly, local industries may approach a school system about implementing a program based on the industry skill standards developed by their national association.

Industry representatives and educators agree that it is critically important for skill standards and curriculum to be validated at the local level.

Potential Roles for Business in Curriculum Development

Identifying current and future employment needs. Business needs to provide the education system, at all levels, with accurate employment needs and projections. Partnerships can then organize instructional programs within the school-to-careers system to meet those needs.

All employers certainly will know their current employment needs, and they should be able to predict those needs over several years based on past record, upcoming projects, local economic conditions and business forecasts. If Joe's Automotive says it will need five new technicians each year, then it's a good bet that all regional automotive employers will require more workers. This means schools would be wise to expand automotive programs, work closely with businesses to develop the most relevant courses and learning opportunities and market the heck out of them. This is just one example.

Conversely, if businesses in other industries expect to cut back on hiring, a school must be ready to make mid-course corrections rather than allow inertia to sustain a program. Again, candor and preparation are crucial. Business partners must be ready to share information about hiring needs and educators must know to seek it—and be ready to act.

Determining and confirming skill standards. Robert Sherman, executive director of the National Institute for Metalworking Skills, refers to skill standards as industry's "purchase orders for education." They are the performance specifications that identify the academic, employability and job-specific skills and knowledge that industry requires of its different workers. A skill standard, according to the National Coalition for Advanced Manufacturing (NACFAM), answers five questions:

- What is the skill? (action)
- What are the conditions under which the action is performed? (conditions)
- Why must the action be performed? (rationale)
- How good is good enough? (assessment criteria)
- How will the action be measured? (documentation)

In answering these questions, standards reflect the realities of the workplace. They can be important tools for making education decisions, aligning curricula with industry requirements and assessing student performance.

To ensure that the skills students learn will be portable across community and state lines, partnerships need to promote standards that are approved and supported as widely as possible— across several states or nationally. Curriculum developers should begin with the broadest sources of skill standards available, such as industry-based materials or those from the Vocational-Technical Education Consortium of States (V-TECS). Because labor markets have different resources, equipment and process practices, partnerships often adapt such standards to their local situation.

Business partners usually have primary responsibility for authenticating the skills, conditions and rationale of the standards and then are involved with the education partners in finalizing the assessment criteria and documentation methods. By establishing standards, employers assume responsibility for verifying that what is taught actually is what is needed. Thus, they become part of the certification process.

Reviewing and adapting standards requires commitments of time and energy. It also requires that partners reach consensus. In its 1993 study of state skill standards initiatives, the National Governors Association found that most states conducting occupational analyses drew heavily on the DACUM (Designing A Curriculum) process and the work of the V-TECS in developing skill standards. In these analyses, expert workers and supervisors are brought together in two-day workshops to describe the duties, tasks, general knowledge and skills, tools and equipment and worker traits and attitudes associated with their jobs. A facilitator, usually an educator, works with the group. This focus group produces an "occupational profile" that details graphically the tasks involved in a particular job. This information is submitted to a larger group of workers and/or supervisors for verification.

Influencing curriculum. While industry requirements can provide frameworks for curricula, the role of business in the development of instructional plans, techniques and materials varies considerably. However, an almost universal role of business partners is validating the sequence of learning units, including articulation between secondary and postsecondary schools. In some instances, such as youth apprenticeship programs, business representatives and educators design the entire curriculum together. At the national level, organizations often create model curricula to implement their skill standards program and then field-test them in schools.

Business also can contribute by helping to develop or supply appropriate instructional materials. These could include company forms and handbooks for applied instruction; industry-specific vocabulary lists; case studies requiring decision-making, teamwork or problem-solving skills; and modified computer databases (such as customer service, patient intake, billing, etc.). Industry groups often provide technical assistance to those implementing their skills standards, and some, such as the National Institute for Metalworking Skills, for instance, help schools to secure discounts on equipment from manufacturers.

Providing work-based learning. Whether work-based learning occurs at the work site or at school-based enterprises, industry can help ensure that training plans are valid and are used as serious instructional tools by both employers and schools. Small employers or those specializing in particular areas usually cannot offer instruction in all the tasks or competencies included in an occupation's standards. In such cases, business partners may be able to organize programs in which students work with all the small or specialty employers, rotating from one to another to gain experience, or they may identify additional businesses to augment instruction. (This major role for employers is discussed in more detail in Chapters 6 and 7.)

Providing in-service training opportunities for teachers. Business partners can help teachers see how their subjects connect to the workplace by bringing them in for a firsthand look. Such an opportunity can aid immeasurably in curriculum development. Activities might include paid summer internships for teachers at business sites, job-shadowing opportunities on release time during the school year or work-site visitations at which officials take teachers and guidance counselors on a tour and talk about the company and its employment opportunities. Additionally, business should encourage all teachers to attend workshops on applied instruction, integrated learning and curriculum design. In fact, business should try to assist with such workshops by offering their input or sending representatives to make presentations. (This major role for employers is discussed in more detail in Chapter 12.)

The Whos and Hows of Working Together

Educators at the local and state levels and with representatives of national industry associations provided the expertise for this chapter. Though their perspectives differ, they described very similar steps for working on curriculum development in partnerships regardless of the objective. Generally, these are the steps:

1. Gain support from top-level administrators and business managers for the project.

2. Create a structure for exchanging information about skills and knowledge.

3. Create an initial list of competencies.

4. Determine and validate performance standards.

5. Develop and validate curriculum based on those standards.

6. Periodically update standards and curricula.

Educators need to be open-minded and willing to share power. This does not mean the education system must accept everything the business community suggests. Educators still have the broader responsibility to prepare students for the future, and this means keeping in mind what is best for them as individuals, not only as future employees of local companies.

The following case studies describe how this process works at the local, state and national levels.

"Don't Go to Business With a Blank Page"

BERRIEN SPRINGS, MICHIGAN

In 1994, following passage of the School to Work Opportunities Act, Berrien County Intermediate School District (ISD) in Berrien Springs, Michigan, developed partnerships with local businesses to institute career paths within the high schools in its 14 school districts and to improve work-based learning in the existing vocational programs.

The ISD initiated both efforts, seeing the new law as an opportunity to change the system. School administrators and counselors reviewed available information about career path high schools and studied existing models to determine what made sense for their students. Working with others in the school system, they put together a career path framework of occupational clusters within four "majors": business services technologies; health and human services; industrial engineering; and fine arts and communication. The ISD selected these majors because they provided the broadest categories and greatest flexibility for developing pathways to prepare students for careers locally and nationally.

Develop top-level support. The school administrators then met with top executives and government economic development personnel in the area. They presented to this group of potential partners their ideas about a school-to-work system, career path high schools and the proposed majors. They discussed what was involved in changing the system and asked for help in the process. To begin with, they asked the business leaders to help them determine occupations within each of the four majors and to assist in ensuring that what was taught in vocational classes was what employers needed.

The district expected the change to career path high schools would take some time but wanted to show the business community more immediately that the schools were serious about reform. While working with business partners to finalize occupations and career clusters, district and school personnel also set about changing the part of the school system employers were most familiar with—vocational training.

Create a structure for exchanging information. The ISD created two structures for exchanging information. The first consisted of employer subcommittees to look at career path majors and clusters. In recruiting for these, the ISD worked with area government economic development staff to identify businesses within the proposed majors and business people who were interested in school reform. Subcommittee members were upper management executives and business owners who worked over a two-month period to finalize the framework.

Berrien County built on existing structures and relationships. The co-op education coordinators in all the high schools in the county formed a local association, the School-to-Work (STW) Coordinators Council. Working together gave them greater flexibility and better coordination with employers.

But exchanging information with employers was only one factor in reforming the curriculum. Technical teachers and academic teachers also had to begin communicating. In Michigan, the various school-to-work components within each school became the responsibility of the academic faculty member in charge of school improvement. Paul Bergan, regional director of career and technical education, and Becky Meier, the district's director of school improvement, created a partnership—and their high-level relationship helped bring the two sets of teachers together. The STW council, representing the technical teachers, and the school improvement representatives (the academic teachers) held joint meetings or made sure someone attended the other's meetings so that everyone worked together to integrate technical and academic instruction—a requirement of the career-path high schools.

Create an initial list of competencies. The STW coordinators identified the 25 jobs that had the most demand for co-op education students, including bank teller, auto body repair person, drafting assistant, medical assistant and data entry clerk. Using data from state surveys such as the Michigan Occupational Information System along with skills lists from the Vocational Technical Education Consortium of the States (V-TECS), they prepared a list of skills and knowledge needed for each of the 25 occupations. Both employability and job-specific skills were included.

Determine and confirm performance standards. The STW coordinators then contacted employers in those 25 occupations who participated in co-op education programs (or had done so in the past). The contacts ranged from store owners to bank managers to executives, and most agreed to help write skill requirements for each occupation. The business representatives included personnel and human resource directors, the owners of smaller companies, managers or supervisors and some workers performing the jobs.

The business people and STW coordinators met in working groups representing an occupation or group of occupations. For example, managers and owners of auto parts stores and auto repair shops met together. Bank personnel met together to identify skills needed by tellers, data entry operators and other financial occupations. The groups met weekly, usually for breakfast or lunch. The STW coordinators also met with business representatives individually as needed.

Using the initial list of competencies as a starting point, the employers brainstormed the question, "What are our needs?" The larger employers also surveyed their workers after the meetings — for example, the county hospital's vice president of human relations met with supervisors of the various units to review and modify the list of skills and tasks.

The business partners also participated in developing assessment criteria. The STW coordinators drafted language for the business people to review and modify. The final assessment criteria designate four levels of technical performance:

- has knowledge of the task,
- needs help completing the task,
- can complete the task without help and
- can teach the task to others.

Within six weeks, the various working groups had developed 30 performance specifications for each of the 25 occupations. The specifications for each occupation contained nine or 10 related to employability skills, such as working in teams, time management, as well as basic writing, reading and calculating, and 20 specifically for that occupation. The specifications fit on one side of a sheet of paper.

Develop and confirm curriculum. The technical performance specifications serve as the work-based learning plan for each occupation. The ISD entered the specifications into a database for ease of printing the lists for on-the-job training. The lists also are printed on the back of the certificate a student receives from the employer after successfully completing the on-the-job training. Because the employer signs the certificate, that business becomes part of the certification process, verifying both the validity of the tasks as well as the student's ability to perform them.

To help teachers integrate the performance specifications into their technical coursework, the STW coordinators and the school improvement representatives took these lists of specifications to the vocational and academic teachers and asked, "Are you preparing students to have these skills and perform these tasks?"

Because little of the coursework addressed the employability specifications, the STW coordinators and school improvement representatives focused on those skills initially. Rather than reinvent the wheel, teachers incorporated into their lesson plans and instruction the state's curricular framework of 28 employability skills developed by the Michigan Business Roundtable.

The STW coordinators also helped recruit advisory groups of four or five employers from related occupational areas to meet with the technical teachers and recommend curricular changes to ensure the technical coursework delivered what was needed. Many of the members of these groups had participated in setting the performance specifications. Their recommendations focused on the scope and sequence of the coursework. For instance, one recommendation noted, "The kids don't need a year of drafting on a T-square. Get them into CADD (computer-aided design and drafting) within six weeks."

Meanwhile, district personnel worked with the employer subcommittees to identify occupations within the four "majors" and to organize them into 17 broad, occupation-related clusters or sequences of courses. District personnel developed two pathways for each cluster: a professional pathway leading toward a four-year baccalaureate degree and a technical pathway leading toward an associate's degreee, certification or apprenticeship. District personnel consulted with business partners continually to make sure the clusters and courses they were outlining were appropriate for the occupations.

By the beginning of the 1996 school year, 11 of the 14 school districts making up the Berrien Intermediate School District were committed to operating career path high schools. One high school had the model's four majors and 17 career clusters in place for its freshman class. Five high schools expected to have the system in operation by 1997 and two more by 1998. The others were in various stages of constructing their career paths.

Bergan recommends that educators provide business partners with something to work from as Berrien County did with its framework of majors and clusters and the initial lists of technical competencies. "Don't go to business with a blank page," Bergan says. "They're busy people and expect us to have done our work."

Shared Responsibility

ST. MARY'S COUNTY, MARYLAND

In semi-rural St. Mary's County, Maryland, three partners — business, the school district and the community college — have an equal say in curriculum development. The reform effort began in 1988 and went through several organizational structures as educators came to realize that responsibility for education reform had to be shared equally.

Develop top-level support. In 1988 and 1989, educators and business leaders met to plan how to revise the curriculum and create a tech prep program. They formed the Southern Maryland Educational Consortium, a partnership of three school systems and the local community college. The consortium made presentations to civic groups and invited employers to visit the St. Mary's Technical Center to look at its resources and needs. Today, the Business/Education Community Alliance (BECA), under the auspices of the chamber of commerce, is the vehicle for school/business partnerships. BECA represents 450 businesses, along with administrators and faculty from the high schools and the community college. It is co-chaired by one business person and one educator.

Create a structure for exchanging information. The consortium created four career clusters: four-year college/university, engineering mechanical technology, business management technologies and health/human services technologies. As the clusters were created, curriculum subcommittees emerged by cluster and specialization. Subcommittee members included high school and community college teachers and business people familiar with the various occupations. To help exchange information, the subcommittees also convinced the county to hold workshops run by outside specialists in tech prep, integrated curriculum and applied learning.

Today, after several years of partnership, the community outreach coordinator (COC) at the technical center is the contact point between teachers and employers. For example, when teachers wanted assistance in developing activities and materials to teach resume-writing skills, they went to the COC, who used the BECA membership list to identify job placement agencies and companies with large human resource departments. The coordinator called several of these companies, which assigned staff to meet with the teachers to develop a unit. The coordinator also helps form craft committees of employers with similar occupations. The craft committees are made up of managers and supervisors from four or five companies that belong to BECA. They work with teachers to design courses and organize site visits and job shadowing programs for students in, for example, the graphic arts/printing specialization area.

Similarly, employers interested in establishing a new vocational program contact the COC. In 1994, for instance, two defense contractors approached the technical center and said they needed computer repair technicians. The technical center, with aid from BECA, looked at the job demographics in the area and found the need was sufficient to create such a program. The defense contractors agreed to underwrite the cost of development.

Create an initial list of competencies. The electronics teacher at the technical center started with the initial list of certification competencies for computer repair from the Maryland State Department of Education. These had been developed and validated by a statewide craft committee of representatives from electronics companies.

Determine and confirm performance standards. Working through BECA, the COC identified other companies that needed computer repair technicians. Managers and front-line employees from these and the defense contractors worked with the electronics teacher over a two-month period to revise and expand the state competencies, adding and deleting based on what the employers needed. The result was a comprehensive list of tasks and duties. Teachers from the community college's electronics program also took part in the meetings, focusing on the articulation for entry into the community college from the high school.

Develop and validate curriculum. To create the curriculum, the employer representatives and the high school and community college teachers grouped the tasks and duties into courses, wrote objectives for the courses and then put the courses into a logical sequence. Because most of the instructional material for the program consisted of software from computer vendors, the teachers suggested the technical coursework be organized around the available software.

The group also established assessment criteria and evaluation techniques for both classroom and work-based learning. Once the parties were satisfied with the curriculum, they signed an agreement validating the instructional process. The partners found the curriculum evolved as students moved between work sites and the technical center, and they worked together to make changes.

Use Industry Associations to Drive the Vision

OREGON BUSINESS AND MANAGEMENT CERTIFICATE OF ADVANCED MASTERY (CAM)

In 1991, the Oregon legislature passed a bill to reorganize the state's secondary education structure. The traditional structure, with a single high school diploma, was replaced with two levels of proficiency. The first level, the Certificate of Initial Mastery (CIM), covers required academic, entry vocational and citizenship skills. Attainment of the CIM corresponds to completion of the tenth grade. The second level, the Certificate of Advanced Mastery (CAM), parallels completion of the final two years of high school and prepares students for initial career entry or further postsecondary education.

The CAM is organized around six occupational areas: Business and Management; Arts and Communications; Health Services; Human Resources; Industrial and Engineering Systems; and Natural Resource Systems. During 1994–1995, the Business and Management curriculum development project established proficiency standards for its area, and then developed curricular and assessment frameworks to guide individual districts, schools and classroom teachers.

Develop top-level support. Because the project would develop a conceptual framework for the whole state, project director Vickie Shray involved state industry associations and business executives in the process. She focused on meeting and talking with association presidents and business leaders such as CEOs and human resource vice presidents. "I wanted them to buy in and serve on the steering committee at the policy level. Then local schools and businesses would have a contact for resources."

Create a structure for exchanging information. Two statewide advisory groups worked on the Business and Management Project: a design team of educators from public schools and community colleges; and a steering committee representing industry, education, government and related associations and agencies.

These were the objectives used to select the advisory groups:

- Reflect the state's geographic regions.
- Include small and medium-sized companies as well as large firms in the four Business and Management program areas (accounting; marketing; office systems; and hospitality, tourism and recreation).
- Seek a pool of business participants with diverse backgrounds, ages and occupations.
- Attract people who are knowledgeable and experienced in their fields and who are willing to commit time and effort to the project.

Most of the 37 members of the steering committee were business people — 16 from firms or businesses and six from associations. Completing the committee were 10 members from secondary and postsecondary schools and five from government agencies. Most committee members were in management positions, with more than a quarter responsible for employment, recruitment and training. Some companies had both management and staff representatives.

Associations represented on the steering committee included The Oregon Business Council, the State Retail Association, the Oregon Society of Certified Public Accountants, the Private Industry Council and the Northwest Labor Council. Employers included banks, travel agencies, marketing firms, a statewide department store chain and a national hotel chain.

Create an initial list of competencies. Oregon educators developed initial lists for three levels of competencies:

1. Core competencies for all CAMs.
2. Competencies common to all programs in the Business and Management CAM.

3. Competencies specific to each of the four programs in the Business and Management CAM.

The steering committee identified the competencies in the four program areas largely through a literature search based on three objectives:

- Locate recent "industry-based" sources for competencies.
- Examine work done at different levels and situations (national and international sources, local and state sources, large and small businesses, urban and rural environments).
- Identify commonalities across sources to reduce redundancy.

Only documents produced since 1990 were used to develop the lists. They were scanned into a data file, analyzed and organized by topics within each program area. Using these, the design group created initial statements of competencies for the topics within each program.

Determine and confirm performance specifications. Oregon used the Rand Corporation's Delphi Method to organize its validation process. This involved using a series of questionnaires to decide whether to retain, modify, reject or add to the competency statements.

The design team and steering committee met separately at first, and then together, as they decided what to include and how to word the standards, defined the specific tasks for each competency statement and determined criteria for assessment levels.

The process resulted in the validation of 10 general proficiency statements that spanned the four specific program areas and included basic skills and core competencies. The advisory groups then reviewed and revised up to 10 specific tasks for each of the statements. The steering committee reviewed the specific tasks and organized them into an appropriate sequence. With the assessment criteria, these became the proficiency standards.

Develop and confirm curriculum. Subcommittees of the design team developed a worksheet format for model curriculum planning and produced samples for each of the 10 standards. Each worksheet includes the standard definitions, instructional strategies, curricular models and resources, a brief description of suggested curricula and assessment models and spaces to check off applications to other CAM areas, foundation skills, opportunities and advanced applications.

The curricular models were modified based on the critique of the full design team, a review by the steering committee and, through a series of regional meetings, input from teachers, parents, local business people and other interested individuals. On the local level, Shray trained interdisciplinary teams of teachers from high schools and postsecondary institutions on how to develop programs consistent with the state framework. Also, local employers and teachers use the worksheets to develop and coordinate local instruction.

Develop Programs for New Occupations

MARYLAND STATE DEPARTMENT OF EDUCATION

It is a challenge, of course, to develop a curriculum for an occupational area. But it can be an even greater challenge to establish a program model and curriculum for a new occupational area. To develop a tech prep model for "high-performance manufacturing" (HPM), the Maryland State Department of Education, Division of Career Technology and Adult Learning (DCTAL) took the following steps.

Develop top-level support. Because there was no single definition of high-performance manufacturing in 1994, DCTAL developed a survey in conjunction with the Regional Manufacturing Institute and the DACUM Resource Center at Dundalk Community Center. The survey asked 1,300 manufacturing companies to review several definitions of high-performance manufacturing and choose one. Seventy-two companies indicated they were HPM organizations and wanted to participate in the project.

Five of the HPM companies agreed to host groups of up to 25 teachers and guidance counselors from around the state. During these visits, participants learned about the companies from company officials and received tours from managers.

Create a structure for exchanging information. As its structure for business/education partnerships, Maryland uses statewide technical committees, a formal part of the Perkins Act. The committees have three objectives: to validate inventories of skills for model curricula; to assess specific labor market needs; and to provide additional advice for current and future career and technology programs. Early in 1995, following the survey, DCTAL established an HPM technical committee of industry representatives and educators.

Create initial list of competencies. DCTAL invited executives from the 72 HPM companies to help identify HPM occupations. Top- level representatives from 39 of the companies agreed to attend one of four workshops held in different parts of the state. At these two-and-a-half-hour sessions, participants were asked to identify jobs, trends and levels of employment within the manufacturing industry. Their efforts distinguished three functional areas within HPM: maintenance/multi-skilled, production and pre- production. After the technical committee reviewed the results of the workshops and agreed that the three focus areas were appropriate, the DACUM Resource Center prepared an inventory of skills for each of them.

Determine and confirm performance specifications. This step of the process began with a "task revision and update" workshop for each of the three functional areas. The workshop attendees were workers and supervisors sent by business leaders who had participated in the Tech Scans. During the sessions, participants identified the tasks, duties, knowledge, skills, attitudes and equipment needed in each area, making additions or revisions to the initial skill inventory. The results of the three sessions were melded to produce a list of core skills common to the three functional areas and a list of skills specific to each area.

Develop and confirm curriculum. At this point educators were brought into the process. High school and community college teachers met with industry representatives to develop a curriculum model and the framework for 14 instructional modules that could be used in local HPM programs. The HPM Technical Committee reviewed the model and framework.

The complete curriculum package was disseminated throughout the state in fall 1995. Local education agencies were encouraged to plan and conduct instructional development workshops for high school and community college teachers to enable them to jointly develop a syllabus identifying goals, objectives, performance standards, instructional strategies, delivery options and assessment mechanisms for each of the units in the curriculum plan.

Voluntary National Skill Standards

Over the last few years, industry organizations developed pilot skill standards for 22 occupational areas with grants from the U.S. Departments of Labor and Education. While the National Skill Standards Board has not officially endorsed them, the standards can be a useful resource for local and state partnerships.

- The Oregon Business and Management CAM project compared the national retail standards for the professional sales associate position (as developed by the National Retail Federation) with its own CAM standards and found many similarities. This indicates how the standards of a national program can complement state standards.

- Maryland's DCTAL incorporated skill standards developed by three national demonstration projects in the design of performance specifications for jobs in high demand. Local education agencies will use these skill standards as they develop or revise skill lists for occupational programs. The national standards came from the Electronics Industry Foundation (for electronics technicians), the Foundation for Industrial Modernization (for personnel in computer-aided drafting and design) and the Education Development Center and The Institute for Education and Employment (for technical workers in clinical laboratories and in pharmaceutical and biotechnology companies).

- Educators also can use national skill standards or other professional standards to interest an employer or industry association in the curriculum development process. Get the list of the pilot skill standards programs from the Employment and Training Administration of the U.S. Department of Labor and meet with employers to talk about upgrading the school's vocational program or starting a new one. Contact professional associations to find out what they may have developed to specify skills needed for the profession. For example, the nation's largest accounting firms published "Perspectives on Education: Capabilities for Success in the Accounting Professions." Vickie Shray referred to that document when she met with the director of the Oregon Society of Certified Public Accountants, who agreed to participate in the CAM curriculum project.

- In Alabama, a local chemical company used the American Chemical Society's skill standards to develop a program for the new position of process technician. The company and its union met to review the national standards for the position and to adapt them for their own needs. The company then brought together representatives from other chemical plants in the area and created an alliance of employers to support the local standards.

Finally, the alliance invited representatives from local school districts and community colleges to meet with them to learn industry's needs and to jointly develop a tech prep program to meet those needs.

- The American Chemical Society also is playing a strong role in designing curriculum to improve the correlation between core academics and the technology used in chemistry occupations. Using national standards, the industry has designed "Science Technician: Skills and Knowledge." This program presents an introductory set of skills for chemical lab technicians, process technicians and other science-based technicians (although the program also emphasizes that these positions require postsecondary education, too). The society began field- testing the model in tech prep, career cluster and other school-to-careers systems during the 1996–97 academic year.

- The National Institute for Metalworking Skills is working with employers at the state level to implement machining skill standards developed by the National Tooling and Machining Association. The institute works to get local companies involved in advisory committees to validate performance criteria for machining programs, but it leaves the bulk of curriculum development to the schools. Robert Sherman, the institute's executive director, urges schools to do their homework in determining what kinds of employers are in the area. For example, a school district might have in its confines a significant number of small machine shops that could support a machining program.

Tips for Success

Business has an obvious role to play in developing the structure and content of curricula for school-to-careers systems. School systems and state education departments will be better able to take advantage of this expertise if they consider the following tips.

- Avoid reinventing the wheel locally. Adapt standards established by professional and industry associations for state and local situations.

- Take whatever support you can get initially from employers and industry associations. Often, the education system will have to prove it is serious about making changes before employers will give significant time and effort to curriculum changes.

- Recognize that the standard-setting and curriculum process is time consuming and requires resources. Work within your partnership to obtain commitments.

- Help partnership members understand what's involved. Be prepared to conduct or support workshops and other staff development sessions for local teachers and business representatives on curriculum development, instructional design and integrated learning.

- Although setting performance specifications is only one step in the process, it is the obvious first step for business. Be sure to include employees who are experienced, proficient and knowledgeable about the required skills.

The new economy, born of technological and competitive changes, requires a broader range of skills than Americans traditionally have been taught. The only effective response to this challenge is for education and business to exchange information about these skills and to work together to determine how they will be taught and assessed.

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Resources Mentioned in this Chapter

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Berrien County Intermediate School District
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Berrien Springs, MI 49103
616-471-7725

Ken Chapman
Head Technician, Resources/Education
American Chemical Society
1155 16th Street, NW
Washington, DC 20036
202-872-8734

DACUM Resource Center
Dundalk Community College
7200 Sollers Point Road
Baltimore, MD 21222
410-285-9869

National Retail Federation
325 7th Street, NW
Washington, DC 20004
202-783-7071

George Forrest
Acting Principal
St. Mary's County Technical Center
Leonardtown, MD 20650
301-475-0242

Doris Sharkey
Occupational Education Curriculum Specialist
Maryland State Department of Education
Division of Career, Technology and Adult Learning
200 W. Baltimore Street
Baltimore, MD 21201
410-767-0185

Robert Sherman
Executive Director
National Institute for Metalworking Skills
2209 Hunter Mill Road
Vienna, VA 22181
703-281-1610

National Skill Standards Board
1441 L Street, NW, Suite 9000
Washington, DC 20005
202-254-8628

Vocational-Technical Education Consortium of States
Commission on Occupational Education Institutions
Southern Association of Colleges and Schools
1866 Southern Lane
Decatur, GA 30033
800-248-7701, ext. 543
404-679-4501, ext. 543

Chapter 6

Work-Based Learning

How You Can Begin to Plan Effective Programs

By James L. Hoerner
Virginia Polytechnic and State University

Traditionally the schooling process has been mostly about the learning of content knowledge, academic knowledge, that too often appears to have little relevance to real life. Increasingly students are asking why they need to learn what is being presented. Research shows that two out of three young people see little intrinsic value in the schooling process. This skepticism begs for radical education reform.

Perhaps no single commentary sums up the current condition of education more than "Connecting School and Work," a 1995 report of the National Center on the Educational Quality of the Workforce: "Our primary concern, however, remains the condition of American education — and the growing perception that our schools and colleges are failing to produce work-ready citizens. In increasing numbers, Americans have come to believe that neither high school nor college graduates learn basic problem-solving competencies, that too often they know little or nothing about the world of work, and all too often they appear, particularly to would-be employers, as undisciplined and disinterested in work itself."

This paints a rather dismal picture of our current educational system.

It's obvious that what we now need is a schooling process that prepares all of its constituency to be productive individuals capable of making a living regardless of career direction. Unlike many other industrialized nations, the United States has neglected to include work-based learning — learning based *on* as well as *in* work — within the schooling process for the majority of its youth.

This chapter provides a comprehensive discussion and a guide to development of work-based learning: what it is; why it's needed; the goals of work-based learning; and a comprehensive review of the planning process. The following chapter discusses specific types of work-based learning experiences.

Work-Based Learning — What Is It?

The term work-based learning has been used extensively during the last several years — especially since the inception of the School-to-Work Opportunities Act of 1994, which provides seed money to help states integrate school-based learning, work-based learning and connecting activities in education programs.

But there's still a lot of confusion over the definition of the term.

According to the law, work-based learning is a required component of school-to-work systems and must relate to the school-based component and the career majors students pursue. Work-based experiences also must include mentoring and instruction in workplace competencies including employability skills as well as instruction in all aspects of industry.

Work-based learning is the key to school-to-work transition if it's done right. I believe there are two definitions to work-based learning. The first, and more traditional, definition is learning experiences and activities that are based on and in some type of work setting or simulated work setting (apprenticeship, internship, cooperative education, on-the-job training, career academies, student-run businesses set up in schools, occupational or technical labs and the like).

The second definition is a far more subtle form of work-based learning that must not be overlooked. It could be the driving theme throughout the educational process that adds the single most important ingredient generally missing in U.S. schools: Work-based learning helps students understand the connection between school and living productive lives. At the core of our economic well-being is work, which gives structure and meaning to our lives.

It is important that we design work-based learning experiences as part of a comprehensive package and not as isolated trips to a job site. **Exhibit 6-1** lists what is included in effective work-based learning programs.

EXHIBIT 6-1

Effective Work-based Learning

A theme or focus of integrated learning and work experiences that runs throughout the school process and includes:

1. Simulated and job-based, paid and unpaid work experiences.
2. Integrated academic learning experiences relevant to careers.
3. Coordination of school-based learning with career pathways and career majors of students.
4. Job shadowing.
5. Adult mentors at the workplace.
6. Instruction in general workplace competencies such as positive attitudes and habits, dependability, trustworthiness, continuous learning, teamwork, customer skills and other employability skills **(see Exhibit 6-2 for a comprehensive list).**
7. Broad instruction in all aspects of an industry.

Why Work-Based Learning for All?

Why is it important for the school system to provide work-based learning for all students? A number of educators, especially those rather satisfied with the current system, appear to be quite dubious about the school-to-work and work-based learning reforms.

This concern is grounded in the question of the basic purpose of the educational system. Until teachers, counselors and administrators at all levels of education, along with school boards, parents, private-sector and community leaders and society at large talk realistically about this, little change will occur. Unfortunately, our current educational system still is patterned greatly after the beliefs of the Greek philosopher Plato, who is given credit for establishing the basis for the educational system of the western world. Plato put forth two basic premises around which our current education system still clings. They are: (1) those most adept at learning will be the rulers, leaders and decision makers and (2) those least adept at learning will be the workers and doers. This basic philosophy then established that the education system has a major role in sorting out the learned from the less learned to determine who will get the opportunity to be the rulers, leaders, administrators, bosses, politicians and the holders of the higher-level careers. Schooling according to Plato's hierarchical pattern has been a process of selection, rejection, classifying and segregating with greater prestige accorded to the study of ideas and abstractions and lower prestige given to practical studies and manual work.

Others hold to the broader definition of education that includes an understanding of how knowledge may be applied to real-life situations. This dichotomy in educational philosophy continues to be a source of the continuing dilemma over the appropriate purposes of education.

Moving Beyond Plato

Through the first half of this century, Plato's model served our students and our economy well enough. The majority had little need for much learning—they just needed a strong back and know-how to follow orders. That's not the case today. The Bureau of Labor Statistics reports that by 2000, only 15 percent of the workforce will be unskilled and 65 percent will need to be skilled, with still only 20 percent who will enter professional careers. These statistics dictate a much different educational system than it took in 1950 and before when at least 60 percent of jobs were unskilled and only 20 percent were skilled.

This rather drastic change in the workforce suggests that application of technical knowledge and problem solving have become extremely important for a much higher percentage of the workforce today and in the future.

"If any student should experience work-related education, then all students should experience it. Otherwise those students who experience work education and those who don't are kept on separate tracks," explains Larry Rosenstock, executive director of the Rindge School of Technical Arts in Cambridge, Massachusetts.

Our current educational system generally provides further learning and preparation for productive employment for the top 25 percent of the workforce—those who complete at least a four-year college or university degree. We seem quite willing in the United States to provide a schooling process that assumes major educational responsibility for the economic futures of approximately 25 percent of our population.

As President Clinton said, "If you want a good economic future, there can be no simple division between work and learning."

Goals of Work-Based Learning

"Today, too many of our young people see no connection between what they learn in school and the skills they need to function in real life." (U. S. Secretary of Education Richard Riley, 1996).

Regardless of the activities, work-based learning experiences must have purpose and reason for implementation. One of the concerns is that since the school-to-careers concept mandates work-based learning activities, students might be provided job experiences without the necessary planning required to assure a sound rationale underlying the experiences. Partners who plan, develop and implement work-based learning strategies should look to these goals:

Goal 1—to provide relevance and meaning to learning experiences. Probably the single major reason to incorporate work-based learning experiences within the schooling process is to add relevance to what students are being asked to learn. The more students see a reason for learning, the more they are likely to try to learn. Most adults realize that young people are not very interested in learning something for which there appears to be little relevancy. Again, the answers "because I say so" or "it will be on the test" no longer suffice as they did 20 or 30 years ago, when teachers were looked up to as unquestioned authorities.

Work-based learning experiences are wondrous tools for helping young people see meaning for learning. As an example, a project relating to real work experience or visits to several industries might provide the relevance needed to show the importance of good communication skills.

Goal 2—to provide hands-on application. Is there any concept, knowledge or skill that everyone should learn for which there is no application? Most educators would agree that comprehension, retention and transfer are three desirable outcomes of all learning experiences. NAEP (National Assessment of Educational Progress) results show that while most students can remember facts and solve routine textbook problems, they have difficulty interpreting an experiment, comprehending a text or persuading an audience. They can't rise above the rote, factual level to think critically and creatively. They can't apply what they know spontaneously to solve ill-structured, ambiguous problems that require interpretation. It's not what you know, it's what you can do with what you know that counts.

Work-based learning experiences can provide relevant, hands-on application of what is being taught. Performing projects in shops and labs or completing tasks and assignments in various job settings can provide meaningful application for school learning.

Goal 3—to provide contextual and integrated learning experiences. Contextual learning includes strategies that help students see how parts fit within the whole. Most work settings require the application of many skills and knowledge sets. Unfortunately, much of our schooling process is segmented and unrelated. Teachers deliver topics in sequential fashion and do not attempt to draw connections. "Only in school do we have 43 minutes of math and 43 minutes of English and 43 minutes of science. Outside of school we deal with problems and concerns in a flow of time that is not divided into knowledge fields," says Heidi Jacobs in her 1989 book, *Interdisciplinary Curriculum: Design and Implementation.*

Performing projects and tasks in occupational labs, school-based enterprises or job sites gives students their best chance to integrate knowledge and skills to see how they relate to the bigger concept.

Goal 4—to provide connections between school and work. Since so much of the emphasis throughout the schooling process, from kindergarten through university, is put on "learning for knowing" instead of "learning for doing," most teachers do not draw connections between their subject matter and the workplace. That's because educators at almost all levels have had little work experience outside of education.

America's Choice: High Skills or Low Wages, a pivotal 1990 report on the need for education reform, notes the condition that too often exists — "the lack of any clear, direct connection between education and employment opportunities for most young people is one of the most devastating aspects of the existing system." This continued lack of connection throughout the schooling process has caused very capable individuals to drop out of school just because they do not see how it will help them in their lives. And there are more college dropouts than high school dropouts. About half of those who start college do not finish. While there are many factors that influence this dropout rate, not seeing any connection to real life no doubt is a major factor.

Students who experience work-based activities that parallel their schooling have a greater opportunity to see the connection. This is especially the case if there are mentors at school and in the workplace who help emphasize the connection. Classroom teachers also can contribute by making sure their material has application in various work settings and relates to the career majors of their students.

Goal 5—to provide career awareness and exploration. One of the major missing components of our current schooling process is career guidance — especially at the elementary level. Ideally, career awareness and career exploration and counseling should begin at the earliest possible age but no later than the 7th grade. Students cannot make meaningful career choices at any age without adequate prior career awareness information and exploration. Even university students who do not get adequate career information and exploration cannot make career choices. The findings of the College Needs Assessment Survey reflect that more than 60 percent of undergraduates rate the need for more career information among their top four educational and personal priorities. The fact that seniors had just as great a need to learn more about careers as freshman suggests they are not getting the information.

Until young people have observed and worked with carpenters, lawyers, plumbers, medical doctors, engineers and bulldozer drivers, how can they know if any of these careers are the appropriate fields through which they would like to make their living?

Goal 6—to learn relevant employability skills and what employers want. Many employers say young people seem not to grasp the importance of the skills they need to be successful in the modern workplace. According to educator Curtis Miles, if young people are going to fit into a high performance workplace, they must have pertinent academic knowledge and technical skills and know how to adapt to change, listen, work in teams, solve problems, take responsibility, deal with others, act motivated, calculate, communicate, concentrate, learn to be dependable, take risks, handle stress, think reflectively, read effectively, lead, persist, manage goals, manage time, act ethically, act confidently, use systems and be independent.

Exhibit 6-2 shows a list of skills that employers consistently say they look for in job candidates. Educators should review this list and ask themselves what courses and other school activities support the development of such skills. Well-developed work-based experiences can provide excellent opportunities for young people to recognize the importance of developing the kinds of skills needed in the modern workplace.

EXHIBIT 6-2

Employers Want Workers Who:

1. Read, write and communicate effectively
2. Have sufficient math and computer skills
3. Are good team members
4. Are respectful to fellow workers
5. Have good customer relations skills
6. Have a strong work ethic
7. Are committed employees
8. Are self-motivated learners
9. Have effective problem-solving skills
10. Follow instructions
11. Are honest and trustworthy
12. Are adaptable and flexible
13. Have good work habits
14. Have demonstrated the capacity for work

Goal 7—to provide specific career preparation and skills of the job. It would be unthinkable for a university medical program to operate in isolation from medical facilities. The same philosophy should apply to all high school, community college and university programs that aim to prepare the carpenters, engineers, machinists, lawyers and electronics technicians of the future.

Goal 8—to give dignity to practical learning, application of knowledge and work. How much longer will we accord greater prestige to the study of ideas and abstractions and lower prestige to practical studies and manual work? The liberal arts have been considered suitable educational fare for the potential leaders of society and vocational studies more suitable for the potential followers and workers. All educators, including those in universities, must own up to the role they have played throughout history in providing this "sort system."

Well-designed work-based experiences can help young people recognize the dignity in their abilities to apply knowledge and do a good job.

The Planning Process for Work-Based Learning

The planning process required for effective work-based learning experiences is multi-faceted, but one major theme applies: Educators, who generally have had little experience with planning and developing learning experiences that take place outside the classroom, must prepare for serious change. Kathleen Paris, in her 1995 "leadership model," presented 12 assumptions about change. The following six are most appropriate to planning and implementing work-based learning experiences:

- People do not change unless they perceive a compelling need.
- Effective efforts to promote change involve the key stakeholders in planning and evaluation.
- Teachers in the classroom are the ones who ultimately will decide whether to implement school-to-careers and work-based learning.
- Involvement in the process of change creates advocacy.
- Collaborative planning must involve all stakeholders from the beginning.
- Successful school-to-careers and work-based learning efforts involve the community rather than just a school district.

In planning, developing and implementing work-based learning experiences and activities, these five major steps must be addressed:

1. Identifying and involving the key stakeholders who need to participate from the beginning.
2. Determining the objectives of the work-based learning activities and experiences.
3. Developing specific work-based learning strategies and logistics.
4. Implementation of activities.
5. Evaluation and follow-up.

STEP I — Identifying and involving the key stakeholder groups.

This could be one of the most difficult steps for educators. It is important to remember that we have reached a point in history when education of our young people can no longer be the sole responsibility of educators.

There are at least 12 stakeholder groups who now must play a role in planning and designing and implementing the educational process in this country:

- Teachers
- Labor representatives
- Counselors
- Government officials
- Administrators
- School boards
- Teacher educators
- Business/industry employers
- Chambers of commerce
- Parents
- Students
- Other community agencies

Design of work-based learning activities must give representatives of these various groups an opportunity for input. All teachers, counselors and administrators now must buy into work-based activities. School board members will need to sanction them. It's obvious that private-sector employers have a major role in providing work sites and supervising the work experiences. Wherever labor unions exist, they must take part in work experience for our youth and play a role in supporting such activities.

Local government can play a major role in supporting work-based learning concepts in many ways, such as awarding certificates and otherwise recognizing industries for establishing partnerships and providing work-based learning for students. Local chambers of commerce can serve as viable brokering agencies between schools and employers. Parents, of course, must support the concepts of work-based learning for their children. Students—the recipients and the participants—obviously should have opportunities for input. And other local community agencies such as churches and civic groups can offer their facilities for training activities or forums for addressing school reform. Several community organizations also may be able to provide service learning opportunities for students.

Once the stakeholders are identified, parties must call a first meeting to get organized and launch the purpose and mission of work-based learning experiences. The first step includes developing meeting schedule formats, agendas and committee assignments within the stakeholder groups.

Educators will need to call the first meeting. Most local school systems and community colleges that are starting school-to-work and work-based learning systems have assembled a local group to function as a steering committee. Often the group identifies co-chairs (one school representative and one business/industry representative) to lead it.

Statement of Purpose for Work-Based Learning Experiences

Work-based learning is an essential part of the school-to-work transition that provides a dimension of reality that schools alone cannot readily provide for students. Through work experience, students have the opportunity to see firsthand how what they learn in school is used in the work world. Work-based learning provides the opportunity to develop skills in communication and problem solving and puts students in contact with adults who may act as mentors and positive role models. Such experiences give students a taste of what various careers entail on a day-to-day basis. Work-based experiences provide a means of career awareness and exploration, enhancement of personal and interpersonal skills, and development of occupational skills related to students' career majors. These experiences help focus and bring meaning to the school experiences and are designed so that postsecondary education remains an option for all students.

The agenda of the first meeting usually is to form a structure and decide on frequency, location and dates and times of meetings. Then the group forms committees, such as executive/ steering, public relations, marketing, strategic planning, mentorship, technical assistance/in-service development, resources and evaluation. In forming the organization and committee structure, remember to get many community members involved and not have only a few carrying the whole load.

STEP II — Determining the written statement of purpose and objectives of the work-based learning activities and experience

Now you need a statement of purpose so that all stakeholders understand why work experiences are being planned. See above for a general model.

This statement of purpose can be written by a committee and presented to the first or second planning meeting.

The partners also must set out clear objectives. Generally, work-based experiences must include

- career awareness and exploration activities to acquaint young people with options
- enhancement of academic learning
- development of broad employability skills such as time management, teamwork, communications, peer relations, dependability and workplace ethics (see **Exhibit 6-2**)
- development of specific skills that relate to the career majors.

STEP III — Developing specific work-based learning activities

Since chapter 7 details specific work-based learning activities, this section will not cover in great detail the various forms of strategies and activities.

While each work experience has its own unique details that must be arranged, there are several general items that partners must be sure to cover. Tulare County School District of Visalia, California, developed this 14-point checklist for work-based learning:

1. Instruction is provided in general workplace competencies and interpersonal skills.
2. Employers provide structured learning at the work site.
3. Everyone understands work-site placement criteria.
4. Opportunities are available for all participating students.
5. Students are effectively matched with employers.
6. Students develop learning and training plans with teachers and workplace instructors.
8. Students are engaged in real, productive work.
9. Students are exposed to all aspects of an industry.
10. Work-based activity explicitly reinforces academic and technical lessons.
11. Employers and educators jointly design outcomes.
12. Employers and educators participate in curriculum development and approval.
13. Advancement at work site is based on student knowledge, skill level and performance.
14. Responsibility for liability, insurance and workmen's compensation for students is established.

There also are several key logistical and legal issues that need to be addressed, as well as expectations to communicate and make clear to employers, such as the kind of experience, the quality and direction of the experience and the kind of on-site supervision or mentoring desired. It also is important to establish clear procedures regarding issues such as emergencies, attendance and communication with the coordinator and/or school.

Liability and transportation. The school's attorneys and insurance agencies will need to be consulted about liability and transportation issues. Students must be covered for potential injuries at the work site and parents must sign a release form. See **Exhibits 6-4 to 6-6** for sample release and medical forms that should be in the file of each student participating in work-based learning. Details will, of course, vary depending on whether it is a paid on non-paid experience. (See chapter 10 for a detailed discussion of liability issues.)

EXHIBIT 6-4

RELEASE AND COVENANT NOT TO SUE

I, ________________________________, in consideration for my child ________________________,
Name of Parent or Guardian *Name of Student*

being allowed to participate in the ______________ Course taught off-campus at the ______________ Company, City, State, in cooperation with the Generic Corporation, and with full knowledge of the risks attendant to this type of training do hereby RELEASE and FOREVER DISCHARGE Generic High School, the Generic Independent School District, its officers, employees and agents, the State of ______________, the Generic Corporation, its employees and agents, [AND ANY OTHER RELEVANT ENTITIES], acting within the scope of their employment or otherwise, from any and all liability, responsibility, charges, claims, demands, damages, costs, expenses, actions and causes of action (known and unknown), relating to physical or psychological injury resulting from any negligent acts which may occur during said activity, including transportation to and from said activity.

I, on behalf of ________________________________, further covenant and agree to indemnify and hold harmless
Name of Student

Generic High School, the Generic Independent School District, its officers, employees and agents, Generic Corporation, its officers, directors, employees and agents, the state of ____________, [AND OTHER RELEVANT ENTITIES] from any and all damages attributable to my child's negligence while engaged in the above described Course.

Any action brought against the above-named parties by myself, my agents, executors, administrators, legatees, heirs or assigns, or those of ________________________________, or his/her guardian or conservator, as a result of
Name of Student

injury or death suffered while participating in, or being transported to and from, said above-described activity, shall be considered a material breach of this Agreement.

________________________________ ______________
Signature of Parent or Guardian *Date*

____
Name of Parent or Guardian

________________________________ ______________
Signature of Student *Date*

________________________________ ______________
Signature of Witness *Date*

Source: Julie Wallace, Greater Corpus Christi Independent School District

EXHIBIT 6-5

CONSENT TO MEDICAL TREATMENT

I, ______________________________, do hereby give my permission for ________________,
Parent or Guardian *Student*

Social Security Number ______________________________, to participate in the ________________

Course to be given by the Generic Independent School District in cooperation with the Generic Corporation, from ________, 1996 through ______, 1996 at the Generic Company, City, State.

In the event of an injury or illness occurring to ______________________, during participation in said class, I do hereby consent in advance to any medical procedures, including but not limited to x-rays, anesthesia, medical and surgical diagnostic procedures, or any other treatment considered necessary in the judgment of attending physicians, paramedics, emergency room personnel, or medical staff.

I understand that in the event of injury or illness to ____________________, every reasonable
Student
attempt to notify me as soon as possible will be made.

______________________________ ________________
Signature of Parent or Guardian *Date*

____
Address City State Zip Code

( )______________________ ( )______________________
Home Telephone Number Work Telephone Number

Name of Emergency Contact Person ______________________________

Phone Number ______________________________

Relationship to Student ______________________________

Source: Julie Wallace, Greater Corpus Christi Independent School District

EXHIBIT 6-6

MEDICAL INFORMATION

1. My son/daughter is on medication, including over-the-counter medication.

Name of medication ______________________________

For treatment of ______________________________

Dosage ______________________________

Frequency ______________________________

Prescribing Doctor ______________________________

2. My son/daughter has allergies.

Please list allergies: ______________________________

3. My son/daughter has reactions to the following medications.

Please list the medications: ______________________________

4. My son/daughter has a condition or disease, including but not limited to asthma, hearing loss, and epilepsy, that may interfere with his or her ability to participate in this activity.

Please specify condition or disease: ______________________________

5. My son/daughter wears glasses and/or contact lenses.

Please specify: ______________________________

6. Other pertinent health information is listed below:

____

____

______________________________ ______________

Signature of Parent or Guardian *Date*

If the school district uses school buses to transport students to and from the work site, the buses must be insured specifically for this purpose. If students provide their own transportation, they must show proof of insurance. These arrangements will vary from district to district.

Hours of attendance. Students usually must fill out time sheets, which are monitored by the employer and kept by the student. Time sheets can be designed for the given job setting, although the standard time sheet or time card should be used where appropriate. It is important that both the employer and coordinator monitor the time record. The coordinator, of course, ultimately is responsible and must make periodic site visits and regular phone calls to the employer.

Supervision. Make clear that the supervisor is to work one-on-one with the student and become a personal supporter and mentor. It is extremely important for the job-site mentors to receive special training on their role and responsibility from the schools. The training can vary from one or two days to a week or more. Kathleen Paris suggests that job-site mentors must learn:

- how to supervise and educate students,
- how to relate well to adolescents,
- applicable school rules that students must follow,
- how to translate school-based skills and knowledge to the workplace.

The most important key to effective work experiences is good communication. It's imperative that the school and work coordinators and supervisors meet at least once a week to make sure all is going as planned. (In the beginning of the work experience, it may be necessary for the coordinator to visit once every couple of days.) Telephones, beepers, computers and e-mail as well as face-to-face meetings become part of effective work-based experiences.

Effective communication for any work-based learning activity should begin with a confirmation letter and be followed at various steps with written documents and correspondence that clearly establish the responsibilities of the teacher, the student and the employer and communicate any problems. See **Exhibit 6-7** for an example of a confirmation letter.

STEP IV — Implementation of Activities

A program cannot be implemented until it is clear that:

- An adequate career guidance program has been established.
- The school has determined which staff will monitor the work-based learning experiences.
- The parties have scheduled regular meetings and determined how they will communicate.
- Students get orientation for the training.

EXHIBIT 6-7

SAMPLE CONFIRMATION LETTER

GENERIC INDEPENDENT SCHOOL DISTRICT
P. O. Box 000
Generic, TX 78435

Aerospace Company
P. O. Box 000
Generic, TX 78435

Dear Sir:

This letter is to confirm the Internship of John Smith, Student for the months of April and May. During this time the student is to perform the duties you feel would be the most beneficial both to the student and to your office. We want each student to learn how to work hard! If you have any problems in regard to the student's working ability or Internship, please contact me.

The student realizes this time spent during the internship is an extension of training and you are under no obligation to render a salary. After successful completion of the internship, the student will be eligible for permanent placement if you so desire.

You will be receiving, at a later date, an evaluation sheet for you to complete regarding the student's performance. This will be of great value to us, as it will enable us to evaluate not only the student but also our training program.

We sincerely appreciate your assistance. We feel your program has much to offer not only to the student but also the community.

If you have any questions about our school, the student, or any part of our training, please feel free to contact me.

Sincerely,

Jane Doe
Career and Technology Director

Source: Julie Wallace, Greater Corpus Christi Independent School District

- Site supervisors get orientation and training.
- Parents receive details.
- An evaluation system is set up.
- The parties decide on what type of logs they will use to document the experiences.

JAMES L. HOERNER is a professor of career and occupational studies in the College of Human Resources and Education at Virginia Tech University, Blacksburg, VA.

- Ongoing counseling and support services are available.
- The school-to-work coordinator knows how to function as a liaison between employers, students, parents, counselors and teachers.
- A record-keeping system has been established.

Implementation will vary, of course, depending on the parties and the type of work-based learning experience. See the next chapter for specific case studies.

STEP V — Evaluation and follow-up

All phases of the work-based learning experiences should be evaluated as they are being planned, developed and implemented as well as at intervals such as the end of each activity, school term and school year.

Ongoing, "formative" evaluation activities would include feedback from the stakeholder groups during the planning stage; feedback from students, parents, employers and work-site mentors following orientation training sessions; and feedback from students, teachers and employers at several points during the work experiences. Informal evaluation occurs when mentors note comments in logs. See **Exhibit 6-8** for a sample supervisor's evaluation form.

"Summative" assessment and evaluation should be conducted at the various completion stages of the work-based experiences. Teachers and mentors working with the students should be asked to evaluate their in-service activities to determine how prepared they feel. At the end of each work-based learning experience, the students, employers and mentors must be surveyed on their reactions. See **Exhibit 6-9** for a sample feedback form.

Paris also points out the need for process measures against which the overall success of the school-to-careers program and work-based learning components are assessed. Such measures might include:

- All students will have a personalized career planner and portfolio.
- 80 percent of students will have a work-based learning experience during their high school years.
- All high school courses will be reviewed and revised to include application and integration.

Communities, too, may have goals upon which to evaluate STW programs, such as the percentage of students who:

- complete high school
- enroll in two-year colleges
- complete apprenticeship programs
- earn college degrees
- become employed in their chosen field
- take positions in jobs of certain salary ranges

EXHIBIT 6-8

SUPERVISOR PERFORMANCE APPRAISAL

PERSONAL EVALUATION

Attendance & Punctuality ______________________________

Ethical Behavior ______________________________

Reliability & Adaptability ______________________________

Initiative ______________________________

QUALITY/QUANTITY OF WORK

Knowledge and Skills ______________________________

Awareness and Workmanship ______________________________

Quantity of Work Performed ______________________________

WORK HABITS

Cooperation/Acceptance of Instruction ______________________________

Oral and Written Communication ______________________________

Housekeeping and Safety ______________________________

Efficiency/Use of Time ______________________________

Acceptance of Responsibility ______________________________

SUPERVISOR'S COMMENTS

____

____

____

____

(e.g. fast learner, good initiative, willing to learn, demonstrated great pride in his work, courteous with pilots, hard working.)

Source: Julie Wallace, Greater Corpus Christi Independent School District

EXHIBIT 6-9

STUDENT INTERNSHIP QUESTIONNAIRE

In a sincere effort to improve the Internship, we are looking for suggestions toward that goal. We would appreciate your honesty in completion of this questionnaire.

Name: ______________________________ *Date:* ______________

1. What did you like most about the program?

____

____

____

2. What did you dislike about the program?

____

____

____

3. What recommendations would you give to improve the program?

____

____

____

4. What suggestions would you give to your mentor to help improve the program?

____

____

Source: Julie Wallace, Greater Corpus Christi Independent School District

The points covered in this chapter are not the sum of all topics that should be addressed during planning sessions. There are other important ones, such as specific roles of business/industry in work-based learning; determining the number of work sites; models for work-based learning; training plans; and specific formats and strategies for work-based learning. These other topics, components and concepts are cohesively linked and merit a separate discussion in the following chapter.

References

103rd Congress (1994, March). Goals 2000: Educate America Act, H.R. 1804.

Advisory Board of the National Center on Educational Quality of the Workforce (1995). "Connecting School and Work."

Berryman, S. & Bailey, T. (1992). *The Double Helix of Education and the Economy.* New York: Institute on Education and the Economy, Columbia University.

Bruer, J. (1993). *Schools for Thought.* Cambridge, Mass: The MIT Press.

Carpenter, J. and Dawson, J. (1995). "Developing a Learning Plan and Employer Agreement." *Successful Strategies: Building a School-to-Careers System.* Alexandria, VA. American Vocational Association.

Clifford, M. & Flores, R. (1995). "Creating a Partnership by Agreement." *Successful Strategies: Building a School-to-Careers System.* Alexandria, VA. American Vocational Association.

Hoerner, J. (1996). "Employers Want Workers Who ..." A special paper developed for presentations. Virginia Tech University, Blacksburg, VA.

Hoerner, J. (1986). "Another Look at the Philosophy of Education." A lecture given at Wolverhampton Polytechnic, England.

Hoerner, J. (1996). "Work-Based Learning: The New Paradigm." A presentation paper. Virginia Tech University, Blacksburg, VA.

Hoerner, J. and Wehrley, J. (1995). *Work-Based Learning: The Key to School-to-Work.* Westerville, OH. Glencoe/McGraw-Hill.

Hull, D. (1993). *Opening Minds, Opening Doors: The Rebirth of American Education.* Waco, TX: Center for Occupational Research and Development.

Jacobs, H. (Ed.)(1989). *Interdisciplinary Curriculum: Design and Implementation.* Alexandria, VA: Association for Supervision and Curriculum Development.

Joyce, P. and Voytek, K. (1996, May). "Navigating the New Workplace," *Vocational Education Journal.* AVA, Alexandria, VA, Vol. 71, no. 5, pp. 30-32 & 48.

Lester, J. (1994, January). "U.S. Adults Say Schools Are Not Doing Enough to Help Students Develop Job Skills, Find Jobs and Plan Careers, Says New Gallup Survey." A paper and presentation given at the National Press Club: Washington, DC.

Miles, C. (1994). *The Mindful Worker: Learning and Working Into the 21st Century.* H & H Publishing Company: Clearwater, FL.

National Association of Secondary School Principals (1996). *Breaking Ranks: Changing an American Institution.* Reston, VA. Commission on Restructuring of the American High School.

Paris, K. (1995). *The Road to School-to-Work: A Map for Implementation.* Bloomington, IN: Agency for Instructional Technology.

Parnell, D. (1994). Legal Learning: Search for Meaning in Education. Waco, TX: Center for Occupational Research and Development.

Reich, R. (1994, August). Presentation given at National School-to-Work Conference August 4, 1994. Washington, DC.

Reich, R. (1996, Summer) "Jobs, Skills, and the Disadvantaged." *Community News and Views,* Michigan State University, East Lansing, MI. Vol. 9, No. 1.

Reich, R. (1996, July). Satellite presentation at the National Leadership Forum. Long Beach, CA.

William T. Grant Foundation Commission on Work, Family and Citizenship. (1988). *The Forgotten Half: Pathways to Success for America's Youth and Young Families.* Washington, D.C.: The William T. Grant Commission on Work, Family and Citizenship.

Chapter 7

Strategies for Work-Based Learning

By James L. Hoerner
Virginia Tech University

Work-based learning has been around since the dawn of civilization. We do not presume to suggest that this is somehow a new idea. What's different about current proposals are the options we can create within the work-based learning and the key roles that business people and educators must play in designing effective activities. The role of business and industry now extends beyond the workplace and into the schoolhouse.

While employers' roles in work-based learning usually are associated with student experiences in the job setting or job-based components, there are many roles for employers in the school-based dimension. These include providing in-service training for educators, participating in curriculum development, being guest speakers, providing tours of a facility, donating equipment and supplies and joining other kinds of partnerships.

Within the job-based component, however, employers must play a major role in providing meaningful skill-based experiences that will help students develop both technical and academic skills. This can be a cumbersome task for profit-conscious employers who may feel they don't have the time to devote to it. Educators can clear this hurdle by continually stressing the benefits of work-based learning to employers as well as students and by ensuring effective strategies from the outset.

How Employers Benefit from Work-Based Learning

- Contributes to development of a pool of qualified entry-level workers.
- Fulfills civic responsibility.
- Increases company morale with the introduction of enthusiastic young people.
- Provides an investment in the future.

Where to Place Students

This should be one of the first steps in designing your strategy. The number of job sites needed to give all students work-based learning experiences is greatly dependent on the interpretation of work-based learning experiences as well as the school setting and several other factors. In a rural area with few (if any) industries nearby, work experiences in real job settings may be more difficult to arrange. However, even in such rural areas service industries and small businesses still exist. And if part of the purpose for work experience is to learn many of the "employability skills," such as dependability, following orders and customer relations skills, the kind of business or industry becomes less important. Fast-food restaurants and retail stores can provide meaningful work experiences for future medical doctors, lawyers and engineers as well as future carpenters, welders and bank accountants.

It would be wonderful if we could arrange work experience that align with each student's specific career interest. But during the early school years, when most young people are still trying to find a focus, most work settings and experiences will have much to offer if structured correctly.

Also, in areas that lack a broad variety of employment opportunities, school-based enterprises (student-run businesses within schools), career academies and vocational labs can provide excellent hands-on and simulated work experiences. Work-study programs that place students in jobs within the school, such as clerking in the front office, and summer employment opportunities also are good options.

At this point in the young school-to-work movement, it makes more sense to ask not how many job sites are *needed* but how many are available for all students. I have yet to see a formula that shows, for instance, that the school and community must provide 250 job sites for every 1,000 students in order for all students to have a three-month work experience.

The key to determining the job sites is determining the kinds of work experiences that educators and community leaders agree they would like to provide for young people and then discussing the options and alternatives that exist or can be developed.

School-Based Work Experiences

The school-based options described above are especially appropriate for students in extremely rural or urban settings and for exploratory activities.

School-based work experiences can provide many of the same kinds of hands-on career experiences that you'd find in the real world. A health career academy is excellent for future medical practitioners, whether medical doctors, dental assistants or nurses. Vocational drafting labs have excellent hands-on skill development for the future engineer, architect or designer. Vocational programs traditionally have provided these kinds of valid work experiences.

An additional plus with the school-based work experiences is the increased opportunity to integrate academic knowledge such as science, math and communications with career skills development. As educators recognize the increased importance for applied, relevant, integrated learning, and as team teaching becomes the norm, school-based enterprises and other school-based work experiences will become more prevalent.

EXHIBIT 7-1

EDUCATION/TRAINING AGREEMENT

Youth Apprenticeship

This agreement is between *School [District Name] [District Number]* and *[Employer Name] [FEIN Number]* and *[Youth Apprentice Name] [Social Security Number].*

This agreement was prepared by *[Name] [Date Prepared].*

The undersigned parties agree to enter into a youth apprenticeship for the purpose of educating the student named above in the *[Type]* industry.

The Youth Apprenticeship Consortium has been approved to operate a youth apprenticeship program and will oversee implementation of this agreement.

The youth apprenticeship program will begin on *[Date]* and be completed on *[Date].*

Upon successful completion of this program, the youth apprentice shall be awarded a high school diploma by the school district named above, and a Certificate of Occupational Proficiency issued by the State Department of Labor.

Starting wage for the youth apprenticeship will be $ *[Dollar Amount]* per hour. Incremental increases will be determined by the local consortium in conjunction with the employer.

A detailed schedule of courses and work is attached that identifies required courses for each semester, the hours of work-based learning and the amount and type of credit to be awarded to each.

The youth apprentice's signature and that of his/her parent or guardian authorize the school to release progress, grades and attendance reports to the local consortium and the State Department of Labor while this agreement is in effect.

The Department may void this agreement upon application of the youth apprentice, the school district or the employer after a satisfactory showing of good cause.

The parties agree to the following responsibilities in the implementation of this agreement:

The Youth Apprentice agrees to:

- meet the academic and attendance requirements established by the local youth apprenticeship consortium;
- observe company rules and other requirements identified by employer;
- participate in progress reviews scheduled with mentors, school personnel and parents or guardians.

The Youth Apprentice's Parent or Guardian Agrees to:

- support the youth apprentice in meeting the requirements of the program;
- work with the school and employer to ensure that transportation to and from the work site is provided;
- participate in progress reviews with mentors, school personnel and the youth apprentice.

The School District Agrees to:

- support the youth apprentice in meeting the requirements of the program;
- work with the youth apprentice's parent or guardian and the employer to ensure that transportation to and from the work site is provided;
- participate in progress reviews scheduled with mentors, the youth apprentice and the youth apprentice's parent or guardian;

(continued on next page)

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EXHIBIT 7-1 (CONTINUED)

The School District Agrees to:

- provide necessary academic and technical instruction and/or contract with a technical college to provide same;
- follow the curriculum provided for the program for all occupationally related instruction;
- monitor the academic progress of the youth apprentice to ensure that high school graduation requirements are met as identified on the accompanying schedule;
- award a high school diploma to the youth apprentice upon successful completion of the program as outlined in the accompanying schedule.

The Employer Agrees to:

- provide a work-based learning experience for the length of the agreement;
- pay the youth apprentice for hours worked according to the pay schedule agreed upon by the local youth apprenticeship consortium but no less than the state minimum wage;
- provide worker's compensation coverage for the youth apprentice for all hours worked;
- instruct the youth apprentice in the competencies identified in the curriculum provided for this program;
- authorize the mentor to attend training related to the program;
- authorize the mentor to participate in progress reviews scheduled with the youth apprentice, the youth apprentice's parent or guardian and school personnel.

The parties to this agreement shall also comply with the following assurances:

A. No individual shall be excluded from participation in, denied the benefits of, subjected to discrimination under, or denied employment in the administration of or in connection with any youth apprenticeship program on the basis of race, color, religion, sex, national origin, age, disability, political affiliation or belief or sexual orientation.

B. Youth apprentices must be provided with adequate and safe equipment and a safe and healthful workplace in conformity with all health and safety standards of federal and state law.

C. The local youth apprenticeship consortium will establish and maintain a grievance procedure for youth apprentices, a copy of which will be given to and explained to the youth apprentice at the beginning of the program. All employers participating in the program must agree to follow the grievance procedures for work-related grievances on the part of youth apprentices.

D. No employer shall hire a youth apprentice who will displace any currently employed worker (including a partial displacement, such as a reduction in the hours of non-overtime work, wages or employment benefits).

E. No youth apprenticeship program shall impair existing contracts for services or collective bargaining agreements. Any youth apprenticeship program that would be inconsistent with the terms of a collective bargaining agreement shall be approved only with the written concurrence of the labor organization and employer involved.

F. No employer will hire a youth apprentice when:

1. Any other individual is on temporary layoff, with the clear possibility of recall, from the same or any substantially equivalent jobs, or
2. The employer has terminated the employment of any regular employee or otherwise reduced its workforce with the intention of filling the vacancy so created with a youth apprentice.

G. All other safeguards that are identified by the State Department of Labor will be honored and observed.

SIGNATURES:

Student:

Parent or Guardian:

School Representative:

Employer:

State Dept. of Labor:

Note: Adapted from Wisconsin Department of Industry, Labor and Human Relations, Office of Workforce Excellence, Madison, WI (reprinted with permission of the Agency for Instructional Technology).

School-based enterprises, such as full-service salons, construction and home building programs, mini-restaurants, business and office services and automotive repair are the next best thing to being there if they are structured to align with comparable work experiences in the real world. To develop these programs, teachers must have experience in the field and keep current on advances in the industry. Students who participate in these businesses receive school credit for developing technical know-how and crucial customer relations skills.

School/work study programs also are good alternatives. Too often we fail to see the value in students taking on jobs within the school that could provide excellent experience. The future medical doctor could develop customer relations skills as well as record keeping in the front office of the school. She or he could also develop several job-related skills by working as an assistant in the biology or science lab.

Getting Ready for Job-Based Experiences

If educators are fortunate enough to procure a sufficient number of employer partners to provide work-based learning, there are several ways to go. Regardless of the experience, though, there is one thing common to all: Before a student sets foot in an actual business, the parties must decide on a training plan and sign an official agreement that covers such aspects as supervision, communication, liability and evaluation. The agreements must include the responsibilities of all parties—the student, the employer, the parent and the school system. **Exhibit 7-1** is a sample education and training agreement for youth apprenticeship adapted from the Wisconsin Department of Industry, Labor and Human Relations. **Exhibit 7-2** is a sample of a Philadelphia training agreement.

Both samples are good models for developing work-based learning experiences. Agreements like these further ensure the commitment of all parties and further students' responsibility for their learning experiences.

Job-Based Options

JOB SHADOWING

Job shadowing, which entails following workers as they perform their jobs, is valuable as a career awareness and exploration tool for students, primarily those in elementary and middle school. Students are not paid for this experience but they gain invaluable knowledge of the work environment, employability and occupational skills in practice and career options. Such experiences also can help students see the linkage between classroom learning and work requirements. Almost any workplace can provide a job shadowing experience.

Job shadowing logistics will vary from setting to setting as well as with the age of the students and conditions of the job. An example might be a middle school student shadowing a nurse for a day. The student would be permitted to observe the nurse in practice as much as possible. If the conditions permit, the student might ask questions of the worker, who can explain the actions he's taking. Although the person being observed is not a mentor, per se, he still needs some prior counseling about what the teacher expects the student to gain from the experience. The employer must be fully notified well in advance.

EXHIBIT 7-2

TRAINING AGREEMENT FOR SCHOOL-TO-WORK EDUCATION

[STATE] vocational education regulations and standards/ [STATE] and federal child labor laws require a written training agreement and training plan for each student in a school-to-work program

Name ____________________ Social Security No. ________________

Address ____

Telephone __________________

Birth Date ____________ Age ____ Work Permit No. ______________

Student Career Objective _____________ Work Site Placement ____________

Date of Employment: Beginning ________ Covered under worker's comp ___ yes _____ no

Employer ________________________

Address ________________________

Mentor/Supervisor ____________________ Telephone ______________

Total Weekly Hours ___________________ Beginning rate of pay ____________

EMPLOYER RESPONSIBILITIES:

1. The agency will adhere to all State and Federal regulations regarding employment, child labor laws, minimum wages and workmen's compensation.
2. The student will be given a variety of work assignments and be supervised by an experienced person.
3. A periodic evaluation of job progress will be made by the mentor/supervisor on a rating form provided by the school.
4. The mentor/supervisor will arrange a conference with the coordinator when a trainee problem arises.
5. The employer will provide necessary safety instruction throughout student training period.
6. The employer will not employ a student-learner to displace a regular worker.
7. Exposure to hazardous work will be incidental to the student-learner's training and not a part of the student-learner's training program.
8. Work that is hazardous shall be intermittent and for short periods of time.
9. The employer is not liable to the unemployment compensation fund for wages paid to the student while in the training program. This is provided in section [ ] of [STATE] Unemployment Compensation Law.
10. The employer shall provide the student with information required by the [STATE LAW].
11. The employer agrees to follow the plan for training by the program's instructors and the training supervisor appointed by the employer; to give the student a variety of work assignments according to the training plan and to provide comprehensive instruction under the direction of qualified personnel.

EXHIBIT 7-2

12. The employer agrees to provide adequate equipment, materials and other facilities required in order to provide an appropriate learning experience for the student- learner.
13. The employer agrees to keep accurate records of the student's attendance and to notify the sending school if the student is absent without notification.
14. The employer agrees to permit the school's representative(s) to visit the student and supervisor at the place of employment to determine progress, obtain direct feedback and make adjustments in the training plan whenever necessary.
15. The employer will hold regular meetings between student-learner and employer representatives to discuss progress, issues and concerns.

WORK-BASED LEARNING RESPONSIBILITIES:

1. The student agrees to perform the assigned duties in a loyal manner and work to the best interest of all concerned.
2. The student agrees to report job problems to training supervisor and coordinator.
3. The student will adhere to company policy; employment may be terminated for the same reasons as regular employees.
4. The student must be regular in attendance at school and on the job. If unable to report to work, the student will notify employer and coordinator will be notified before the start of the normal work day.
5. Transportation is the responsibility of the student.
6. The student working under this agreement is not eligible for unemployment compensation, nor is he/she eligible to use wages received under the program as credit for termination of unemployment compensation benefits.
7. The student will report to school for designated meetings and instruction.

SCHOOL RESPONSIBILITIES:

1. The program is under the direct supervision of a school site coordinator/instructor.
2. The student will receive related instruction and safety instruction from the school instructor during employment.
3. The site coordinator/instructor will visit the student and training supervisor on a regular basis at the training site.
4. Student transportation and insurance at school will follow [SCHOOL DISTRICT] policies.
5. The participating school agrees to award credits earned in the work-based learning program toward the student's high school diploma.
6. The participating school district agrees to adhere to the curriculum and program regulations and standards of the [STATE] Department of Education and the School-to-Work Program.
7. Regular meetings of work-based learners and site coordinators/instructors to discuss progress, issues and concerns.

Employers of school-to-work students will not discriminate in employment, educational programs or activities, based on race, sex, disability or because a person is a disabled veteran or a veteran of the Vietnam era. This policy of non-discrimination extends to all other legally protected classifications. Publication of this policy is in accordance with state and federal laws including Title IX of the Education Amendments of 1972 and Sections 503 and 504 of the Rehabilitation Act of 1973.

This memorandum is for the purpose of outlining the agreement between the school and employer on the conditions of training to be given a student while on the job. It, therefore, should not be interpreted by either agency as a legal document or any form of binding contract.

We, the undersigned, agree to the conditions and statements contained in this agreement.

Work-Based Learning Student ______________________ Date __________

Parent or Guardian ______________________ Date __________

Employer ______________________ Date __________

School Representative ______________________ Date __________

From John F. Kennedy Center, Philadelphia

One of the limits of job shadowing is that it is observation only. Direct work experience and hands-on skills are not acquired.

The value of a job shadowing experience is greatly enhanced if students are required to reflect on their shadowing experience through written and oral reports and discussions when they return to the classroom. Students should be told to look for certain things, such as dress of the worker, the number and kinds of activities they must perform each day, the work conditions, safety and cleanliness of the environment, whether the person being observed works alone or in a team, levels of responsibility and application of knowledge and skill.

WORKPLACE MENTORSHIPS

A mentor is an employee or other individual, approved by the employer at a workplace, who possesses the skills and knowledge to be mastered by a student and who instructs the student, critiques the performance of the student, challenges the student to perform well and works in consultation with classroom teachers and the employer of the students.

Student apprentices and interns almost always are assigned to a mentor, but mentorships are not limited to those experiences. A middle school student, for example, might be assigned an adult mentor who offers career guidance, periodically checks on the young person's progress, occasionally brings the student to the work site to demonstrate a practice or technique, comes to the classroom to make career presentations and is available to answer questions.

Because of the close one-on-one relationship of the student and mentor, it's important that the mentor-to-be receives training to ensure that the experience will be valuable for the student. I recommend that mentors receive some guidance in supervision and education of young people, planning and organizing learning opportunities, evaluation of skill competencies, interpersonal skills as they apply to young people, school rules that students are expected to follow and translation of school-based skills and knowledge to the workplace. Such programs are jointly developed by the school system and employer representatives. Several of the models presented at the end of this chapter have good mentor training activities to follow.

Not every adult worker would be a good mentor. Care must be taken to select individuals who like working with youth and have the personality and patience to coach and share with them. Employers should look for people who:

- have the skills and knowledge to be mastered by the student,
- have the patience and communication skills to instruct and critique student performance
- like to work with young people,
- like to explain how to do things and
- know how to offer criticism constructively.

COOPERATIVE EDUCATION (CO-OP)

Cooperative Education is the most commonly available form of work-based education, targeting roughly 8 percent of the nation's "non-college bound" high school youth with programs that assist them in transition from school to work. Cooperative education programs feature agreements between schools and employers to provide on-the-job training that relates to the student's area of vocational study in school and are based on objectives jointly developed by the school and the employer. Most co-op programs are designed to serve high school students and, less frequently, students in two- and sometimes four-year colleges.

In cooperative education, employers supervise students while they are on the job. In turn, school coordinators and teachers monitor employers. Students get paid, on the-job work experience, occupational skills and orientation to the work world; develop working relationships with employers and mentors and often are hired after they graduate. Employers get a pre-screened, motivated pool of temporary employees, have input into structuring further training standards and develop a source for trained permanent employees, according to Kathleen Paris.

Some co-op programs have been criticized for their lack of quality. Career pathways chosen for the co-op experiences frequently offer limited upward mobility. School-employer relationships are usually local, with inconsistent monitoring or evaluation of training outcomes and benefits. There are no standards for curriculum or certification, and school curricula frequently are not adequately integrated to link school and work learning effectively.

Obviously, the quality of co-op programs, like any other program, varies. They can be improved, according to Paris, if both sides agree to:

- Establish training plans signed by employers, students and school personnel detailing both general employability and specific occupational skills that the student is expected to acquire.

- Screen applicants to ensure they are prepared to meet employers' demands.

- Select employers who provide training in occupations with career paths.

- Closely supervise high school students.

It's imperative that the school coordinator and business/industry representatives develop clearly structured plans for effective work experiences. There isn't any student who wouldn't benefit from a well-developed cooperative education experience.

ON-THE-JOB TRAINING

On-the-job training (OJT) often is considered to be unstructured and characterized as "learning by doing" or "just picking it up" from experienced fellow employees. If it is that unstructured, the method is scattershot. Structured OJT, however, is the one-on-one process of providing the knowledge and skills to perform a specific task within a job and consists of the following five features, according to Ronald Jacobs:

1. Occurs in the actual workplace
2. Makes use of training objectives and plans
3. Requires the active involvement of a trainer
4. Uses printed materials and job guides
5. Employs a systems approach

Programs to prepare students for the health and medical fields have a long history of structured and closely supervised OJT, which they call clinical experience.

OJT does not necessarily have to involve interaction between the school and work facilities. However, OJT programs that take place in the summer could be linked with the academic studies covered during the school year. Since many students have part-time and summer employment, it makes sense to try to make the experience advance a student's career goals.

For example, a math teacher could ask students to talk about the kinds of part-time jobs they hold and then discuss the applications of math concepts to such job experiences. Students can give examples of how they and other workers use math on the job. The same applies to science and English teachers, who also can emphasize development of generic workplace skills, such as following instructions, teamwork and punctuality.

The key is for all teachers to look for ways to draw connections between the classroom and real-world experiences of students.

INTERNSHIPS

Like other work experience options, internships have agreed-on training plans that set out objectives. Internships are common to professional fields such medicine, journalism and administrative services.

Internships are arranged so students can obtain field experience under qualified professionals, usually near the end of an extensive formal education or training program. The intern, who typically is paid based on a predetermined number of hours, frequently is evaluated on her progress and may rotate through several departments or specialty areas in the career field.

While internships have been associated mostly with professional careers, we would do well to expand this option and make it more common to all fields.

SCHOOL-LINKED SUMMER EMPLOYMENT:

Most youngsters work at some time while going to school. Summer is the most common time for youth to seek jobs in the community. Most of them find some kind of work, whether it's mowing lawns, washing cars, working in an office or doing construction. Too often, however, the objective of summer employment is to earn spending money. There typically is no connection to school or a potential career direction. Nonetheless, most summer experiences do provide hands-on experiences and give young people a chance to acquire appropriate employability skills.

With an expanded emphasis on school-to-work connections, summer employment could be linked to school programs so students could see application and relevance to what they are learning. As more businesses and industries recognize their role in forming partnerships with educators, they will become increasingly willing to develop summer employment programs. Businesses may already be more inclined to hire youth in the summer to fill out skeleton crews or to serve an influx of tourists. Educators can approach business people about enhancing these summer experiences just as they would for any work-based learning partnership.

SERVICE LEARNING:

Volunteering for non-profit service organizations, both public and private, can give students not only the empathy and gratification that comes from serving people in the community but also valuable work experience. Service learning frequently is seen as a complement to other school-to-work transition programs where students learn such work-readiness skills as responsibility and develop working relationships with peers and adults in the community. The experience usually is short-term and does not take the student through a progression of skill development. Most service is directed at improving the community rather than at working in a specific occupation or industry.

A student in a service organization may be assigned to answer phones, stuff envelopes, greet members of the community, serve food at homeless shelters or perform other duties involved with keeping an organization or event running smoothly.

Youth service recently received a boost through federal legislation that provides funding, training and technical assistance to states and communities to develop and expand service programs. Youth service appears in the National and Community Service Act of 1990, the Job Training Partnership Act (as part of its summer youth program) and the Community Work Progress Act of 1993. Educators coordinate these activities with employees of the public agencies or private organizations.

CAREER ACADEMIES:

The origins of career academies have been traced to Philadelphia in 1969, where these "schools within a school" were set up to serve at-risk youth and were designated to combine academic course work and vocational training. The approach, which emphasizes smaller learning communities, has grown to provide work-based learning in broad career fields for all types of students.

In career academies, academic and occupational teachers work as a team in planning and delivering the program, which includes the teaching of generic employability skills and keeps open students' options to attend college. Academy students are employed during the summer and, in some cases, part-time during the school year in jobs related to their field of study.

Employers from the career field help plan the program and are involved as speakers, field trip hosts, job supervisors and sometimes mentors. Typically, a mixture of outside funding, school district backing and employer contributions support the program.

YOUTH APPRENTICESHIP:

In 1989, there were approximately 300,000 apprentices in the United States. But most of these apprentices tend to be in their late twenties. Less than 2 percent of U.S. high school graduates enter apprenticeships, according to Joseph McKenna. Our current apprenticeship system, often controlled by the skilled labor trade unions, is not structured for educating youth. But this has been changing as educators and policy makers analyze successful European youth apprenticeship models and propose to implement such a system here.

Youth apprenticeship is being proposed as a model that can target those not immediately bound for college, reintegrate alienated urban youth and help re-establish U.S. dominance in international markets. But, as Tom Bailey has argued, three problems must be addressed before the strategy can be successful:

- Securing employer involvement.
- Improving the quality of on-the-job learning.
- Confronting equity issues.

American-style youth apprenticeship differs from internships and other forms of work-based learning in that training agreements tend to be more focused on the skilled trades, such as those in manufacturing or printing, and may result in entry-level certification. Apprentices usually are paid for their work. Otherwise, apprenticeships are similar to other work-based learning experiences in that they are open to all students, linked to academic instruction, tied to skill standards and pathways to college and careers.

This is the typical youth apprenticeship pattern as it has emerged in several states. Elementary and middle school students are given opportunities to explore careers through job shadowing, other kinds of job "sampling," field trips and employer visits to school. Students sign an apprenticeship contract by the end of 10th grade. During their last two years of high school, students spend part of each day (or week) in school studying academic courses crafted explicitly to be relevant to the world of work as well as technical and occupational courses relevant to their chosen field. They also learn on the job under the guidance of a certified workplace instructor, spending from 30 to perhaps 75 percent of their time in the workplace as they move toward completion of the 12th grade. Apprentices take an interim exam at the end of 12th grade that qualifies them for their high school diploma and permits them to continue on to a community or technical college, where they pursue an associate's degree and continue to spend much of their time at the work site.

A number of school-to-work systems around the country, including those in Wisconsin and Oklahoma, have had quality youth apprenticeship programs in operation for several years.

Work-Based Learning Models

The best way to decide which work-based learning model to choose is to look at existing success stories in the making. I've chosen three to review in this section, and other models are scattered throughout this book.

Valley Alliance for Education, Waynesboro, Virginia Mentor Apprenticeship

The Valley Alliance for Education in Waynesboro, Staunton and Augusta County School Systems in Virginia developed a mentorship/apprenticeship program that expanded from seven students in the 1991-92 school year to more than 200 students in seven area high schools in spring 1996. The program assigns mentors in 31 area businesses that represent 26 different fields.

Mission: To provide opportunities for students to do concentrated research or project development in a specialized field under the leadership of highly trained experts in business.

Program objectives

1. Reach out to highly motivated and/or high-achieving students of all ethnic groups and economic levels.
2. Enhance student's feeling of self-worth by concentrating on his/her identified area of strength.
3. Expand community participation in education.
4. Stimulate interest in the learning process by encouraging students to help plan their own projects.
5. Encourage students to relate the experience of the regular classroom to the world outside.
6. Respond to the special needs of students by nurturing leadership potential in their fields of identified strength.
7. Give students an opportunity to meet professionals involved in a variety of careers.
8. Obtain information on skills required for all types of work, including interviewing, compatibility with others, reliability and appropriate appearance for the work environment.
9. Learn about career options and how to choose and develop these options.

Program Areas

The mentorship coordinators help match each student with a mentor in a field that relates to the career field the student is following. Students explore careers such as architecture, business administration, computer programming/analyst, journalism/writing, law, medicine, veterinary medicine, teaching, engineering, electronics, communications and other disciplines deemed appropriate by the mentorship coordinator.

Program Specifics

- The program is open to highly motivated, high-achieving juniors and seniors. Selection is competitive and based on test scores, academic achievement, essays, teacher recommendations and self-reported interests.

- Students work a minimum of 10 hours each week and complete a minimum of 60 hours every six weeks (total of 180 hours each semester).
- Weekly time sheets are required and must be signed by mentoring supervisors.
- Transportation is provided by student.
- Parents must sign an agreement stating that student is covered by a personal liability/accident insurance policy during travel and time at the mentorship location.
- The mentoring firm signs a business agreement that states conditions and expectations.
- Students must keep a daily log or journal of experiences, activities, processes learned, impressions and research notes.
- Students meet with teachers or counselors once a week to review the log.
- Each student must prepare a five- to eight-minute presentation highlighting their project and mentorship experience.

Evaluation

Students receive one credit for the 180 hours of mentorship. Evaluations are based on input from the mentor, program coordinator and teacher/ counselor. Students are graded on their resumes, logs, assessment by mentors, attendance and participation, timely completion of program forms and paperwork and final project and presentations.

The Fred Meyer, Inc. Business Education Partnership Model

Fred Meyer, Inc. is a leading regional retailer headquartered in Portland, Oregon, that employs 27,000 people. The company's stores sell a wide range of general merchandise, food, apparel, fine jewelry and home improvement products.

In 1994, the company piloted an exploratory job shadowing activity for 12 students at David Douglas School District in Portland, and a four-week exploratory work-based learning experience for 10 students at Willamette High School in Eugene.

Job shadowing experiences range from three hours to a full day. An unpaid structured work-based experience lasts for two hours a day, three days a week, for four weeks. Paid, structured work experience can last five to eight weeks, depending on the model.

Four-week paid internships are available to secondary teachers in Fred Meyer stores, offices, plants and warehouses. Paid, college-level student internships in accounting, advertising, engineering and store management last from eight to twelve weeks.

Fred Meyer plans to coordinate job shadowing, site tours, mock interview and paid and unpaid work experiences at about five pilot sites in Oregon. The company has been collaborating with agencies to determine guidelines for school-to-work activities for special needs students under the existing child labor laws and writing company policy and procedures for managers and supervisors to follow in support of school-to-work activity.

The company, in its ongoing partnership with Mt. Hood Community College, also plans to begin development of a tech prep program directed at the retail industry. This program will incorporate the national skill standards for the retail industry and will build on student experience gained through completion of their Certificate of Advanced Mastery in the business and management area. Students in the tech prep program will be able to enter a four-year degree program in retail food management at Portland State University.

Reprinted with permission from CORD (1996). Turning Students Into Employees: The School-to-Work Payoff. The Center for Occupational Research and Development, Inc. Waco, TX.

The Pratt & Whitney Summer Internship Model

In the late 1980s, Pratt & Whitney analyzed surveys revealing that 30 to 40 percent of the U.S. manufacturing workforce lacked basic literacy skills and about half the adult population could not read well. It then looked at its own employees and found that many lacked basic skills like the ability to actively participate in learning, make decisions, work on a team or solve problems. The company estimated it would take about 75 hours per employee and cost thousands of dollars to correct the deficiencies.

Pratt & Whitney, which manufactures jet engines and aircraft parts, decided to make a commitment to education and attempt to influence its future workforce. It joined three tech prep consortia in Connecticut and then offered time, resources, money and work experiences to enrich the tech prep programs. Since Pratt & Whitney joined the consortia, the company has:

- Coordinated the Tech Prep Committee for Engineering Technologies.

- Provided resources for tech prep guidance counselors and instructors to attend skill workshops and Connecticut's annual tech prep conference. Workshop topics have included CORD's Principles of Technology, applied math, applied communication, competency-based curricula, computer drafting and community-technical college/high school partnerships.

- Helped with curriculum development by contributing specific workplace examples and needs; placing a strong emphasis on math, science and technology; and stressing the importance of problem solving, teamwork, quality, environmental issues and communication skills.

- Sponsored 46 high school students in a paid summer internship program and agreeing to pay tuition costs for those who are successful and who opt to attend the local community college.

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- During the first summer, students earned $6 an hour and worked 30 hours a week. They learned about broad but important workplace issues like quality control, health and safety, environmental concerns, sexual harassment, ergonomics, decision making, team building and conflict resolution.

By the end of the sixth week of the internship, the company found that inner-city and suburban students had begun to question and even eliminate the racial/ethnic barriers that had existed between them in the first weeks. It also found that students needed to develop communication skills, positive attitudes and courtesy at school. The company also suggested a much higher level of career guidance for the students, who, they found, had either unrealistic expectations for their careers or no career direction or aspirations at all.

The students who participated in the program at Pratt & Whitney generally were amazed by what they learned. After two weeks as an intern, one student said, "When I joined the tech prep program, I thought it was going to be boring, I only did it for the college credit and the money. After two weeks I feel totally different. Now the money is less important because I have learned to share my opinions with others, I have learned to communicate better and have learned many things about the company."

Another said, with some amazement, "For the past two weeks, I have been waking up early, getting dressed in shirts with collars, wearing slacks, shoes and even ties. I have been to work every day on time!" Yet another said, "In school I was never taught how to work as a team member…then as my first two weeks passed, I learned that teamwork is the best, and sometimes the only, way to do something correctly."

At the conclusion of the first summer, several students were not invited back and the number of eligible students dropped to 36. During their senior year in high school, three young women became pregnant and were given leaves of absence from the program. By the end of the senior year, eight additional students chose other courses of interest.

Pratt & Whitney began the second summer with 25 students. During this phase, each student was assigned to a full-time job and paid $6.50 per hour for a 40-hour week. Although they were not yet highly productive workers, they were able to perform basic tasks and continue to learn.

These were real jobs, not jobs made up for high school students or simple, mundane tasks. The students were treated as adults and given considerable responsibility.

Twenty-three of these students are now enrolled at Connecticut community and technical colleges, and Pratt & Whitney is paying their tuition. The students must perform at each phase of their education or they will not be allowed to continue. They also must perform well on the job and maintain good grades to continue and return to summer employment.

Pratt & Whitney also will begin a program to give teachers direct workplace exposure. The plan is for 10 teachers to work four to six weeks at the company, for which they will be paid a stipend. Teachers must have their superintendent's commitment to allow them to make curriculum changes in time for fall classes.

When the teachers complete the curriculum changes and have documented them in their teaching plans, Pratt & Whitney will provide a stipend to cover upgrades to the curricula (books, videos and so on). If the teachers choose, they can receive a third stipend from the company to lead a train-the-trainer workshop for groups of educators.

Reprinted with permission from CORD (1996). Turning Students Into Employees: The School-to-Work Payoff. The Center for Occupational Research and Development, Inc. Waco, TX.

Guiding Principles

This clearly is a time of exploration for many of the educational systems throughout this country. The challenge increases the more the approach differs from traditional education.

It's important as we plan to provide *all* students a work-based learning experience that we keep clear three guiding principles in mind: **career exploration** to improve students' understanding of the working world and show them a range of potential careers; **structured work-based learning** that reinforces teaching of employability, technical, core academic and critical thinking skills; and **business/workplace mentors** who provide support and guidance to help young people adjust to adult workplace practices, norms, rules and expectations.

Successful work-based learning programs will not only need to help youngsters but also must benefit private employers. This will require a major mind-set change for educators, business/industry and community leaders.

References

103rd Congress (1994, May). School-to-Work Opportunities Act of 1994, H.R. 2884.

Bailey, T. (1993, April). "Can Youth Apprenticeship Thrive in the United States?" *Educational Researcher.* pp. 4-10.

Hoerner, J. & Wehrley, J. (1995). *Work-Based Learning: The Key to School-to-Work Transition.* Westerville, OH. Glencoe/McGraw-Hill.

Jacobs, R. (1990). *Structured On-the-Job Training.* Training and development research report (ED 326 641). Columbus: Ohio State University.

Kopp, H. & Kazis, R. with Churchill, A. (1995). *Promising Practices: A Study of Ten School-to-Career Programs.* Boston, MA. Jobs for the Future.

McKenna, J. (1992). "Apprenticeship: Something Old, Something New, Something Needed." *Industry Week* (Jan. 20), pp. 14-20.

Northwest Regional Educational Laboratory (1996, July), "What are employer benefits of work-based learning." A fact sheet distributed at the National School-to-Career conference in Long Beach, CA.

Packer, A. & Pines, M. (1996). *School-to-Work.* Princeton, NJ. Eye On Education Inc.

Paris, K. (1995). *The Road to School-to-Work: A Map for Implementation.* Bloomington, Indiana. Agency for Instructional Technology.

Shenon, C. (1992). Union Perspectives on New Work-Based Youth Apprenticeship Initiatives. Washington, D.C. Human Resources Development Institute, AFL-CIO.

Stern, D. Raby, M. & Dayton, C. (1992) *Career Academies: Partnerships for Reconstructing American High Schools.* San Francisco: Jossey-Bass.

Thiers, N. (Ed.) (1995). *Successful Strategies: Building a School-to-Careers System.* Alexandria, Virginia. American Vocational Association, Inc.

Chapter 8

Coordinating School- and Work-Based Learning

By Anne M. Stom
Boston Private Industry Council

At its simplest level, the school-to-work premise involves:

- School-based learning
- Work-based learning
- Connecting activities that link the two

These connections do not happen automatically. They are the result of clearly articulated expectations, free-flowing communication and constant monitoring. The frontline, day-to-day implementation of these programs at schools and workplaces requires a great deal of hands-on work.

In Boston, we call school-to-work *school-to-career.* In part, the distinction helps people understand that this approach to education is not just about work but career preparation, which is necessary for *all* students. It is a conscious effort to change people's perceptions so they begin to envision a system that is good for *their* children. The school-to-career (STC) movement is not a new term for vocational education but the vehicle for restructuring our entire school system.

Those of us who have nurtured Boston's ProTech school-to-career program understand the degree of work involved in coordinating between the schools and workplaces that educate students. Once a pilot program sponsored by the U.S. Department of Labor, the five-year-old ProTech now is a multi-year, STC program that combines school-based and work-based learning experiences to prepare students for occupations in six sectors: business services, environmental services, financial services, health care, hospitality and utilities and communications. In their junior and senior years of high school, plus at least two years in college, ProTech students develop basic, technical and work- readiness skills in one of many targeted occupations.

Career pathways are the backbone of Pro-Tech's STC system. Now many schools are organized around industry-specific career pathways.

The ProTech model accommodates many schools, career pathways and employers, but most of the lessons learned from ProTech are relevant and applicable to other programs whose structure might include just one school and one employer. Regardless of the size of your STC initiative, it must ensure open communication and logistical coordination at both the school and work site. These tasks may be somewhat less labor-intensive for small programs, but the needs remain essentially the same.

The School-to-Career Coordinator

As the school-to-career movement has gone systemwide, with entire schools being restructured around career pathways, the Boston Public Schools (BPS) have created a new position for each school: the school-to-career coordinator to bring together independent programs and pathways into a cohesive system. The full-time STC coordinator does not have any teaching or unrelated administrative responsibilities, such as monitoring cafeterias or study halls.

These are the primary responsibilities of an STC coordinator:

- Creates a leadership team of all relevant school employees to develop an action plan and implement the STC program.
- Provides STC information and education to parents, faculty and students.
- Creates professional development opportunities for school staff to help them implement STC.
- Works with the registrar and administration to revise schedules to accommodate project-based learning (which can require longer periods), team teaching, cross-curriculum projects and common planning time for teachers.
- Works with school faculty and other BPS staff to develop alternative methods of assessment, such as student portfolios and performance evaluation.
- Coordinates STC efforts with state-mandated education requirements.

So far, 10 of Boston's 15 high schools have an STC coordinator. Administrators use the accepted employee recruitment process established by the Boston Teacher's Union to select STC coordinators. Successful candidates for this position frequently are teachers who have been involved in model STC programs in Boston or elsewhere. In all but one instance, those selected to date have been former teachers within the school.

The advantage of selecting qualified "insiders" for these positions is their familiarity with the daily operations of the school. They can interact well with other faculty members and can more easily get them interested and involved in the STC program. Having a teacher embrace the school-to-career concept by competing for this position greatly helps to convince others in the school to accept the program, too.

Establishing Roles

As you establish connections between education and business, it is important to create a governance structure to cover all aspects of your partnership strategy. ProTech has executive groups for each industry cluster, and they include representatives from both education and business — principals from participating high schools and executive-level personnel from business (such as a vice president of human resources). This executive-level group is responsible for establishing the roles and responsibilities of the participants, including the school-based and work-site coordinators. This is the first step toward clearly articulated expectations.

The cultures of schools and private businesses are distinctively different. Getting coordinators to work together well in a partnership that benefits all participants takes effort. It requires commitment, patience, trust and a nurturing spirit. If you have those elements *and* logistical coordination, it's difficult to fail.

The school-based and work-site coordinators are undoubtedly two of the most important personnel in a successful STC program. By opening the lines of effective communication between the business and education communities, they keep the program running smoothly and efficiently, and they help keep it growing. They are partners in support of the student as they work together on recruitment and preparation, student growth and maturity, resolution of daily problems and program success at both school and the workplace.

Pathway Coordinators

Each of Boston's STC schools has career pathway coordinators. The pathway coordinators are full-time employees of Boston's Private Industry Council instead of the school district.

Each coordinator is responsible for maintaining one to two pathways. For example, a pathway coordinator may manage financial services and health care pathways at a specific school. The critical factor in deciding how many pathways a coordinator can manage is the number of students within the pathway. Generally a coordinator cannot handle more than 100 students, and at least half of those should be second-year students. Coordinators provide support services to students and are the school's liaisons to each company involved with a pathway program. A pathway typically involves four to seven companies, but some high schools involve as many as 20.

A sample job description for a pathway coordinator (based on the qualifications for the ProTech coordinator) is shown in **Exhibit 8-1.**

In your search for someone to fill this position, consider the following abilities:

- Energy
- Creativity
- Flexibility
- Empathy

This person must be able to relate to the concerns of many people. She or he will be interacting with educators and business personnel, with students and teachers and employers, with adolescents and adults, with highly educated people and with others who have little education. This person should have a wide range of experiences and should be comfortable in a variety of environments.

However, this position does not require someone with a background in education. In fact, if you are focusing on a particular industry cluster, it often is beneficial to hire someone who has some experience within that industry.

Work-site Coordinators

Usually, work-site coordinators are personnel in the employer's human resources department. Coordinating activities between the company and the high schools is only a part of their job description.

It is logical to use human resources personnel as work-site coordinators, because more often than not these people are seeking to fill real employment needs within their companies. Consequently, when educators reach out to employers, they should emphasize the concept that school-to-career programs help companies

EXHIBIT 8-1: SAMPLE JOB DESCRIPTION FOR A PATHWAY COORDINATOR

POSITION: **Pathway Coordinator**

JOB DESCRIPTION: The **Pathway Coordinator** provides and coordinates overall counseling, guidance and support services for program students, at school and in the work environment.

REPORTS TO: Program Director

GENERAL RESPONSIBILITIES:

1. Provides students with career and personal counseling regarding school, work and college.
2. Prepares students for the world of work through individual and group settings.
3. Serves as team leader and coordinator for school/employer work groups.
4. Ensures appropriate communication among all team members.
5. Provides crisis intervention when necessary for students at school and work.
6. Develops and maintains "training and personal growth plans" for each student.
7. Conducts bi-weekly meetings with each student to review and update progress.
8. Conducts monthly meetings with supervisors to review students' progress at work.
9. Coordinates meetings with school-based STC team regularly. Participants include the headmaster, teachers, school-based program staff and guidance counselors.
10. Reviews and collects information about students' characteristics and eligibility, school and work-site performance and outcomes attributable to work-site experiences.
11. Coordinates recruitment, selection and placement of new program students.
12. Serves as member of school-to-career team, participating in all operational meetings regarding program policy, planning, design and evaluation.
13. Serves as a representative of the program and makes presentations at various functions such as seminars and conferences.
14. Performs other duties as assigned by the program director.

DESIRED QUALIFICATIONS:

1. Experience working in counseling/support setting for adolescents.
2. Strong oral and written communication skills.
3. Strong interpersonal skills that indicate an ability to work well with students, parents and school and work-site personnel.
4. Ability to perform multiple and varied tasks in a fast-paced environment.
5. Strong organizational skills.
6. Master's degree or appropriate baccalaureate degree and a minimum of four years' related work experience.

recruit and develop new employees, energize existing ones and increase diversity in the workplace.

However, as we involve smaller, less tightly structured companies, this model is changing a little. Boston's environmental services pathway is an example. Instead of two to three large companies providing work-based learning for 25 students, there are 20 small companies providing those slots. Most of these employers do not have a human resources department but use a motivated manager to be the contact person. This can be challenging but manageable for the pathway coordinator.

Without the pathway coordinator to handle the variety of conflicts and crises that can happen, many of the smaller companies would be reluctant to participate. As the STC movement progresses to involve more students, it will be faced with engaging more medium, small and extra-small firms.

The most important characteristic for a work-site coordinator is that he or she see the advantages the STC program can offer the company. A work-site coordinator who views the responsibilities as a burden, obstacle or "just one more thing the boss is heaping on me" will not be an asset to your program. The work-site coordinator has to view the program as an opportunity to help the company improve its available workforce by providing training and experience to potential future employees.

Coordinating the Coordinators

Work-site and pathway coordinators must work with one another to create connecting activities between school- and work-based learning. These are some of their many responsibilities:

- Recruitment, evaluation and assignment of students
- Student preparation
- Supervisor preparation
- Support services
- Facilitation of student growth and success
- Student discipline
- Student career and postsecondary counseling

In addition, pathway coordinators must work closely with registrars and teachers to help resolve scheduling issues or conflicts and determine course content for pathway classes. Work-site coordinators are responsible for contacting company departments and supervisors to locate appropriate employment opportunities for students, as well as clearly explaining the requirements and purposes of the program.

Your school-based and work-site coordinators may have additional responsibilities, including recruiting more employers and guest speakers into the STC program, coordinating job-shadowing activities and devising transportation strategies. (Transportation can be an especially important consideration for rural communities.)

Recruiting, Evaluating and Assigning Students

Most school-to-career programs actively recruit and carefully evaluate students for participation in career pathways. In ProTech, the recruitment and evaluation process involves both the school-based and work-site coordinators and appropriate school personnel. Students are invited to an assembly for presentations by the principal, work-site coordinators from the partner employers and students already involved in their work experience. To be considered for ProTech, students must complete an application and submit it with a copy of their transcript, a copy of their current report card and three teacher recommendations. If the student is a legal immigrant but not a permanent resident, he must have an employment authorization card from the INS. Permanent residents must have a copy of their "green card" and, if required, working papers.

Both the pathway coordinator and work-site coordinators review the completed applications. Students are then interviewed by a panel consisting of the pathway coordinator, all work-site coordinators available and, when possible, the principal and a pathway teacher. Parents of applicants are invited to attend their children's interviews.

Since all work-site coordinators can't participate in each interview, ProTech has developed a rating sheet, shown in **Exhibit 8-2,** that interviewers complete for the students they interview. (Even if your program has only one employer and one work-site coordinator, it still is useful to keep rating sheets to help with the evaluation process.) Then the pathway coordinator, all of the work-site coordinators and pathway teachers meet to review the rating sheets, rank students according to the evaluations of interviewers and other relevant information and eliminate those students who have not met the minimum expectations for success in the program.

After the evaluation, students are assigned to companies. Each company receives an even distribution of students — some who ranked high, average and low in the evaluation process. Student transportation issues, gender distribution and career aspirations also are considered in placement of students. Generally, students are not asked to list the companies they would like to work for because at the start of the program most students have little factual information upon which to base that decision. They may select a company because it's where their friends work, because the pay is better or because they perceive it to be an easier assignment rather than for any clear-cut, career-related reason.

Although this evaluation process is labor intensive, it creates a true spirit of ownership on the part of the employers — they have an active hand in recruiting, evaluating and selecting the students who will work for their companies. This process also helps to establish the relationship that will be developed in the coming year between the student and the work-site coordinator.

This ProTech recruitment and evaluation process can serve as a good model for any program. Not only does it engage employers and provide an effective way to evaluate and assign students, but it helps even students who don't get placed immediately because completing the application and interviewing with adults are good learning experiences. Also, the professionalism and selectivity of the entire process attaches a sense of significance, importance, honor and prestige to the program and all its participants.

EXHIBIT 8-2

PROTECH

PROTECH INTERVIEW FORM

Interviewer: An evaluation form should be completed for each candidate interviewed. Points will be assigned for each category as follows:

1=Poor 2=Satisfactory 3=Good 4=Excellent

There is a place for comments under each category. General comments should be written on the back of the last page.

The students will also receive points for their attendance, punctuality and grades for the last two marking periods. These points will be tallied for each student and used to place the students with partner companies. They will also provide a basis of comparison when we do the "draft".

Student Name: ______________________________ High School: ______________________________

Points

1. Student's appearance .... ☐
 Comments:

2. Communication Skills .... ☐
 Comments:

3. Motivation .... ☐
 Comments:

4. Extracurricular Activities .... ☐
 Comments:

5. Initiative (Describe a project that they initiated and completed either in school, at home or at a job) ***Comments:*** ☐

6. Problem Resolution Skills (How do they resolve conflict?) .... ☐
 Comments:

7. Attendance .... ☐

3=Excellent	2=Good	1=Satisfactory	0=Unsatisfactory
0	**1-4**	**5-7**	**>7**

9. Grade Points (will be completed by ProTech Coordinator.. ☐

10. Student's understanding of ProTech opportunities & expectations.. ☐

Total Points ☐

EXHIBIT 8-2

PROTECH

INTERVIEWER'S COMMENTS

Interviewer's Name: ________________________ Date: ____________

Student's Name: ________________________

School: ________________________ Homeroom: ____________

ATTITUDE

(please circle)

poor fair good excellent

LEVEL OF INTEREST

(please circle)

poor fair good excellent

COMMENTS

____

____

____

____

Please circle

Based on this initial interview, would you recommend this student Project ProTech?

YES NO

If not recommended, why?

____

____

____

____

Student Preparation

Once students have been selected for the program, they need to be prepared for the workplace. It is vitally important that you do not skimp on this aspect of the program. Unprepared students who are sent to a work site are less likely to have successful school-to-career experiences and are more likely to leave your program. Employers who receive students who are not prepared will not be as eager to continue with the program, take additional students or, perhaps most important, recruit other employers to participate in your school-to-career program.

Define workplace and school expectations. This preparation actually begins during the application and interviewing process, where expectations are initially outlined. One of the initial tools that ProTech uses to outline expectations is a letter of agreement that must be signed by the student, parents, school and employer. But pathway coordinators must reiterate these expectations to students again and again, stating them clearly and often to minimize any possible misunderstanding. The pathway coordinator should hold workshops for all student "workers" on work-readiness skills, then meet individually with students to reinforce the information.

Career exploration. Students are best prepared for entry into the workforce by participating in a series of unpaid "work-site rotations" one afternoon a week for several hours. In ProTech, to minimize the time away from the classroom, students do these rotations on their own time. This type of preliminary career exploration helps students get a feel for different industries and companies and gives them a clearer idea of expectations.

Although the work-site coordinator is primarily responsible for developing the schedule for the students and designing the rotations, including the content, the pathway coordinator also helps out. Once topics and schedules are determined, they are passed on to career pathway teachers so that lessons learned at the work site can be reinforced in the classroom.

Case studies. Students working at a hospital might be assigned to research the various services that would be provided to a fictitious patient. Then they can determine the various departments that will be involved in providing those services and how where responsibilities would cross. Students would do the research at the hospital, but their teachers would arrange some classroom activities. At the end of the unit, students make formal presentations on their case studies to their peers, teachers and hospital personnel.

Supervisor Preparation

As important as it is to prepare students for the workplace, it is just as important to prepare work-site supervisors for their students. A good orientation or training program helps supervisors by telling them:

- What your program will require of them.
- Effective methods of interacting/communicating with their students.
- Whom they should call for assistance.
- How the work experience relates to the student's classroom experiences.

Supervisors must understand that this program requires more of them than just supervising another new employee. They must be willing to spend more time with a student employee, especially in the beginning. They must understand the program requirements and their roles in completing them.

The work-site coordinator must mention these issues when she or he meets with supervisors about possible employment opportunities for students in the company. But just as the pathway coordinator must remind students of the program requirements and responsibilities, the work-site coordinator must stress the *learning* aspect of work-based learning. Students should be expected to make real contributions, but supervisors should understand they may require more instruction up front.

Both the work-site and pathway coordinators are responsible for creating and implementing supervisor training. Once your program has been in operation for a while, it is very useful to have veteran supervisors participate in these training sessions. They often can address concerns that rookie supervisors might have about working with one of the most complex human species — the teenager.

For the past two years, ProTech has trained supervisors with a unique and effective model. Supervisors are invited to the high schools to attend a day (approximately four hours) of classes covering such topics as adolescent development, supervisor responsibilities, development of training plans and school-to-career basics. PIC staff and ProTech coordinators teach these classes with the help of school health-care staff and organizations such as Jobs for the Future.

During the day, they are just like students, following the regular schedule of the school, changing classrooms when the bell rings and moving through the building along with the other students. They also are expected to follow the same rules as students: they eat in the cafeteria, they can't smoke in the building and they can't leave the classroom without a hall pass. This experience helps the supervisor identify with the student's school environment. It also reminds the adults of what it is like to be a high school student, which can help them as they supervise the student at the work site.

As a result of this training, many supervisors understand both the similarities as well as the vast differences between their high school experiences and those of the students. For example, a supervisor who had been out of high school for only 10 years commented that, when she was a student walking down hallways, she never had to pass posters about student diversity, teen pregnancy, AIDS awareness and violence prevention. But the experience of this training session helped her relate better to her students and gave her a strong motivation to help them succeed in the program.

Student Support Services

The pathway coordinator position isn't a routine, paperwork shuffling job. Each day the pathway coordinator interacts one-on-one with students to solve a variety of problems. The student support services coordinators provide can cover a wide range of activities, including:

- Assisting with schedule changes
- Arranging for tutoring services
- Advocating on behalf of students at the work site and with teachers
- Assisting with personal problems

- Locating appropriate internal and external services for the student, such as child care or counseling

Many of our students are learning how to prioritize and juggle the myriad responsibilities of family, children, school and work. Receiving support for these duties often is the difference between a student's success and failure in the program.

Student Growth and Success

One of the tenets of the school-to-career movement is the importance of lifelong learning. Often that involves setting goals and defining how to achieve them. But, for high school students, planning beyond the end of the next day often is an alien concept, let alone planning for the next year and beyond. Concrete goal-setting is unfamiliar, too. It is important to regularly engage students in this process until it becomes a habit.

ProTech uses "personal growth plans" to establish the habit. Shown in **Exhibit 8-3,** the personal growth plan focuses on three areas of a student's life: academic, personal and postsecondary preparation. The pathway coordinator meets with the students quarterly to review progress on the goals established in each of these areas and to help students overcome any challenges.

This plan helps the students set their goals and think about, in a very conscious way, what they want to accomplish during the year. It also helps students understand the benefit of such a process. Once goals have been established, the pathway coordinator helps the student outline the steps necessary to achieve those goals. For instance, if one of the student's personal goals is to get a motor vehicle learner's permit, the steps involved may include:

1. Finding out the address, hours of operation and phone number of the motor vehicle agency.
2. Picking up a test preparation booklet.
3. Making an appointment to take the permit test.
4. Setting aside the money that will be needed to pay for the permit.

An individualized work-site training plan also is part of a student's personal growth plan. (By February 1997, ProTech will replace these individual training plans with a universal learning plan that lists 11 competencies transferrable between industries. It will help supervisors and teachers identify tasks that strengthen these competencies both in the classroom and at the work site.)

To develop a training plan such as the one shown in **Exhibit 8-4,** the pathway coordinator, the work-site coordinator and the student's supervisor meet to identify the skills and tasks that the student will be expected to learn. In this meeting, the supervisor can propose certain goals that a student would be expected to master. This process gives the supervisor some ownership in the program.

These plans also outline skill progressions for students to help them understand that learning certain skills creates the foundation for learning more complex and challenging skills. Having this type of training plan helps both the supervisor

EXHIBIT 8-3

PRO
TECH

Education at Work

Name ____________________ **High School** ____________________

Senior Personal Growth Plan

Your Personal Growth Plan is an important tool to help you set your goals and think about what you want to accomplish this year. You will have a new Personal Growth Plan for each year you are involved in ProTech. Your plan is based on three principles:

A) Growth happens when you set goals and meet those goals.

B) Growth involves every part of your life.

C) You will grow during your years in ProTech because you receive support and are held accountable.

Your Personal Growth Plan includes the following elements:

◆ Academic Progress

◆ Personal Progress

◆ Post-Secondary Preparation

◆ Worksite Training Plan

I understand the purpose and content of my Personal Growth Plan and with the assistance of my ProTech Coordinator and Career Counselor, I will use this instrument so that I may achieve success in ProTech.

____
Student

____
ProTech Coordinator

____
Date

____
Date

Review date #1 __________
Review date #3 __________
Review date #2 __________
Review date #4 __________
Review date #5 __________

EXHIBIT 8-3

PERSONAL PROGRESS

Example: Getting your driver's license, working through a problem at home, saving plans, etc...

Marking Period (1)
Goal(s): ____

____
____
____
____
____

Marking Period (2)
Goal(s): ____

____
____
____
____
____

Marking Period (3)
Goal(s): ____

____
____
____
____
____

Marking Period (4)
Goal(s): ____

____
____
____
____
____

EXHIBIT 8.1

1995-1996

ACADEMIC PROGRESS

Subject	Goal	Marking Period (1)	Marking Period (2)	Marking Period (3)	Marking Period (4)	Final Grade

Marking Period (1)
Goal(s):

Marking Period (2)
Goal(s):

Marking Period (3)
Goal(s):

Marking Period (4)
Goal(s):

EXHIBIT 8-3

POST-SECONDARY PREPARATION

Seniors

☐ Register for the next SAT if not already taken.

☐ Register for TOEFL (Test of English as a Foreign Language) if applicable.

☐ Ask teachers and employers to write references.

☐ Complete college applications and visit colleges that interest you.

☐ Check with the Guidance Office about eligibility for an application fee waiver.

☐ Ask the Guidance Office to send your transcripts at close of 1st quarter.

☐ Pick up a Financial Aid Form at your high school after January 1 and begin filling it out.

☐ Check with the Guidance Office about local scholarships; also ask people you know who are in professional organizations, i.e. Kiwanis, church groups, military, and community clubs, etc., about scholarships.

☐ Call and schedule a personal interview with a member of the Admissions Office.

☐ Complete career portfolio: ☐ Resume ☐ Personal Statement ☐ Special Project ☐ Other

Marking Period (1)
Goal(s):____________________

Marking Period (2)
Goal(s):____________________

Marking Period (3)
Goal(s):____________________

Marking Period (4)
Goal(s):____________________

and students keep established goals in mind, and it establishes a format for holding regularly scheduled meetings that provide the student with constructive feedback.

Student Discipline

The pathway coordinator has the primary responsibility for carrying out any discipline of a student, including:

- Issuing verbal and written warnings.
- Placing the student on probation for not meeting academic, school or work-site expectations.
- Removing the student from the program.

The pathway coordinator also is responsible for communicating disciplinary actions to the student's parent, the work-site coordinator, pathway teachers and necessary school administrators. A unified, informed loop of adults is extremely effective in impressing upon the student the seriousness of a problem and helps the student meet expectations.

The work-site coordinator is responsible for handling any disciplinary problems that may arise at the work site. In disciplining the student, the work-site coordinator should follow the same official company policy that is used to discipline regular adult employees. Of course, the work-site coordinator must keep the pathway coordinator informed of any disciplinary action.

Student Career and Postsecondary Counseling

Most of today's skilled occupations require some type of postsecondary education that leads to a degree or certificate. The pathway coordinator may *augment* (but should not replace) the traditional services offered by guidance departments by offering career-specific postsecondary information. In addition, the pathway coordinator can help students locate and apply for financial aid.

Often, many of the tasks associated with the college application process can be done in the student's pathway classes. For instance, most college and scholarship applications require personal essays, and these can be written as part of a student's English class and typed in their computer class. The pathway coordinator works with teachers to determine how these activities can be integrated with regularly scheduled lesson plans.

Work-site coordinators usually are not involved in any of the postsecondary planning processes except informally and perhaps as a source for recommendations and leads on company scholarships and other forms of tuition assistance that the company may provide.

Communication

Businesses. You can organize a formal communication structure along industry lines. For instance, if several schools in your district have career pathways in the financial services industries, the various school- and work-site coordinators can meet monthly to discuss industry-specific issues that affect all of the involved

EXHIBIT 8-4

PROTECH TRAINING PLAN

STUDENT:

DEPARTMENT: EEG Laboratory/Neurophysiology Laboratory

POSITION: EEG Lab Assistant*

*The EEG Lab Assistant will be a shared position between the clinical EEG Laboratory and the Engineering group of the Neurophysiology Laboratory. The assistant will work under the direct supervision of the associate technician, who will report to the Chief Technologist of the Neurophysiology Laboratory.

I. Department Procedures:

1=Not Applicable
2=Exposed to Task
3=Performs Task with Assistance
4=Mastered Task
5=Ability to Demonstrate Task to Others

A. CLINICAL DUTIES:

	1	2	3	4	5
1. Removes electrodes from patient scalp followed by washing excess paste from hair.					
2. Set-up for patient recording by washing electrodes, changing linens, restocking supplies and general cleaning of the lab area.					
3. Assists with patient transfers to wheel chair or patient bed for testing.					

B. EQUIPMENT AND SUPPLY MAINTENANCE DUTIES

1. Stocks all supplies within the department, including deliveries of EEG paper, linens and out-of-hospital orders.					
2. May assist in preparing special invasive electrodes, making network cables and minor repairs to equipment under supervision.					
3. Soldering of circuit boards and general assembly of equipment under supervision.					
4. Assists with upkeep of video equipment and tape changes as needed.					

C. CLERICAL/GENERAL DUTIES

1. May assist with organizing storage of in-house EEG records and shipping for permanent storage on microfilm.					
2. Under supervision, assists with computer and network related modifications.					
3. Performs errands as assigned by the supervisor or EEG techs, such as pick-up or delivery of materials sterilized.					

businesses and schools. In ProTech, these working groups are called "employer groups."

Employer groups are involved in the implementation of the program at an operational level, and they meet more frequently (monthly instead of quarterly). Regular meetings provide an excellent forum to resolve issues, establish goals and work on common projects, such as curriculum development or increased connection with the teachers.

Schools. It also is important to establish regular meetings—usually one hour each month—within a specific school. The members of this group should include the pathway coordinators, career pathway teachers, work-site coordinators from all of the business partners (regardless of the industry cluster) and others who are involved in the implementation of the school-to-career program within the school. This group essentially becomes the schôol's leadership team.

Pathway coordinators must communicate regularly with teachers to assess their students' academic progress and behavior and also to provide the teachers with a connection to student work sites. Teachers need to be aware of a student's performance at the work site. Often a positive work experience from a "lackluster" student can lead to improved academic performance and also to a teacher's improved perception of that student.

A well-designed program also gives pathway teachers ample opportunity to meet regularly with work-site coordinators. These meetings can be fertile ground for developing project-based learning and "real-world" examples that can be used in a classroom or for working on curriculum development.

Parents. Parents need to know what is expected of their children, when and where they will be working and whom to contact if they have any questions. Since students must maintain specific academic, attendance and punctuality requirements to remain in these programs, it is important to enlist parents for their support on these issues. Also, it's important to tell parents when their child is doing well, not just when there is a problem.

Communicating with parents can present challenges — there are barriers of language (not all parents speak English), time commitments (many parents work two or more jobs) and interest (some parents are not as concerned about their children as they should be). To help overcome some of these challenges, ProTech has developed several parental outreach materials — not only in English but also in several different languages including Spanish, Haitian-Creole and Vietnamese.

Conflicts often arise between a student's familial responsibilities and the requirements of the program. Teenagers might not know how to work out these conflicts on their own, so the pathway coordinator may intervene to help resolve the conflict. For instance, students may be responsible for getting younger siblings to day-care services, or students from non-English-speaking families might need to act as interpreters for their parents or other siblings at medical or legal appointments. The pathway coordinator should try to help students meet all their responsibilities by communicating and working with parents, the work-site coordinator, supervisors and teachers. But helping in conflicts often requires the wisdom of Solomon — trying to determine how many and which conflicts can be worked out and which can't requires delicate balance, because the adults need to consider not only the welfare of the students but also the welfare (the integrity) of the program.

Other Communication Responsibilities

Both the school-based and work-site coordinators are involved in coordinating media connections and on-site visits to help interested people find out more about school-to-career programs. These activities may include the public relations departments of the company and the school district.

As one of the earliest STC programs in the country, ProTech has hosted hundreds of groups of visitors interested in learning more about how our program is operated. Employers are not required to host site visits, but they often are eager to do so. They are proud of how their students are performing and how their company has been contributing to the success of the school-to-career movement. Nothing is as effective as having an employer who is involved in a school-to-career program encourage another company to get on board.

Communication is the underlying principle behind coordination. If you have committed people in your schools and work sites who talk to each other and share responsibilities, you've secured the linchpin in a successful STC program.

***ANNE STOM** is manager of school-to-career operations for the Boston Private Industry Council.*

Chapter 9

Cultivating Mentors

By Anne M. Stom
Boston Private Industry Council

Mentor was the trusted counselor of the Greek king Odysseus and under whose disguise Athena became the guardian and teacher of Telemachus. "Mentor" has come to mean a trusted teacher — one who passes on technique, skills and wisdom to a younger person.

Today's school-to-career systems use the age-old mentoring model to match an adult worker with a student. Results of a fruitful relationship can be increased self-esteem, higher academic performance and firsthand knowledge of workplace skills.

In the context of STC programs, mentoring programs are indeed an essential element for student success. As students start to acclimate themselves to the business environment, the presence of a work-site mentor can greatly ease the transition, giving them a personal connection in an often large and impersonal organization and a more watchful pair of eyes in a smaller company. Identifying an adult as a mentor rather than just a supervisor is an important distinction.

In some instances, employers use mentoring programs to "test the waters" for becoming more involved with schools and youth. Mentoring as a stand-alone project is one of the easiest ways for an employer to answer some of its questions and can lead to greater involvement down the road.

The Unexpected Miracle

Mentoring is designed to enlarge students' range of vision about their lives and to aid students in academic achievement and success at the workplace. Although mentors can make a difference in the lives of youth, they cannot provide quick-fix answers to problems that have been long in the making. A program in which mentors meet with students for only a few hours per week cannot begin to minimize or mitigate the challenges that face our young people today.

However, by taking the time to design, build and develop a solid structure for your mentoring program, by clearly defining realistic expectations and by properly training your mentors and mentees, you do have a chance to make a positive difference in the lives of both students and adults. And by not expecting miracles, you may, in fact, get some.

Designing Your Mentoring Program

Mentoring programs can be structured in a variety of ways to support connections between business and schools. The first step in designing a strong mentoring program is to convene a work group that includes members of the school faculty and administration, business personnel and representatives of any other external agencies that may be involved with your program.

EXHIBIT 9-1

1. Who should be in your planning group?
   Teachers, business representatives, parents.
2. What is your time line?
   Allow enough time for planning, and arrange for all participants to be involved.
3. What are your program objectives? What do you want to accomplish with your mentor program? What are the needs of both the business and education partners?
   A smooth transition at the work site for student employees, further career and postsecondary exploration, tutoring and the like.
4. How large will your program be?
   Hint: Start small!
5. Who will coordinate the program from the school side and from the business side?
6. How will communications be handled?
   - Between mentor and student (mentee)
   - Between coordinators and mentors
   - Between coordinators and mentees
   - Between work-site and school-based coordinators
   - Between program coordinators and faculty
   - Between mentors and parents
7. How will students be chosen for the program?
   From participants in a specific program, or identified by teachers, parents, counselors.
8. How will mentors be recruited? Who is responsible for recruiting them? What promotional material will you need for recruiting?
9. What type of eligibility screening will you have for mentors?
10. What type of training/orientation program will you have for both mentors and their charges?
11. How often will the mentor and student meet?
12. Where will the meeting take place?
    At the school, at the work site or both.
13. When will the meetings occur?
    First thing in the morning, during the mentor's lunch hour or after school.
13. How will you handle problems such as mentor/mentee mismatches, schedule changes, interpersonal issues or complaints?
14. What type of support will you provide for your mentors?
    Brown-bag lunches with other mentors for discussions, a contact person within the school or company or both.

Be aware that it will take a considerable amount of time to carefully develop a program and that everyone should have equal input. Look to **Exhibit 9-1** for guidance, but remember that only your group can provide answers for some situations.

Characteristics of Good Mentors

It is difficult to list all the characteristics that will make a mentor effective, but certain traits are very important. These traits can be learned and cultivated.

1. **Understand time commitment.**

Mentors must understand the importance of making a genuine commitment to the program. Children who have been frequently disappointed by other adults in their life cannot readily adjust to being disappointed by a mentor, who is supposed to serve as a role model.

2. **Provide a support structure.**

A mentor has to be a leader, a guide, a coach. The mentor has to support the student as he embarks on a new path. The Bank of Boston's mentor training manual (which was adapted from an original handbook published by the Abell Foundation), says, "A mentor encourages their mentee to think, act and evaluate. They praise, prod, connect and listen. They help a young person identify and develop their potential and shape their life. They encourage the mentee to use their strengths, follow dreams and accept challenges."

3. **Respect young people.**

A good mentor must be open to learning about life from a young person's point of view. Students can teach us much if we allow them.

4. **Understand the challenges that face today's youth, both in and out of school.**

Even if your mentors are young at heart or even youthful, it is very likely that life has changed dramatically since they were in high school. All too often, violence is a way of life for many of our young people. Information comes at them rapidly and from all directions in today's media-oriented society. There is greater pressure to become an adult quickly — and there is much confusion over what that actually means. AIDS awareness, cultural diversity and other normal pressures of being a teenager (probably not the same pressures that the mentors faced when they were teenagers) are just some of the issues that our teens grapple with regularly.

5. **Demonstrate a willingness to be as non-judgmental as possible.**

Listening is one of the most important and useful activities that a mentor can engage in. Mentors should encourage young people to talk about their feelings, dreams and concerns. In the role of active listener, the mentor puts aside impulses to direct the young person and instead encourages the student to become increasingly self-directed. Resisting the urge to talk can be difficult for a mentor, especially in the beginning if their charge is shy — but a mentee's apparent shyness might be the result of rarely having been given the opportunity to express an opinion to an older person. The mentor should provide that opportunity.

What a Mentor Is NOT

- A mentor is not a parent
- A mentor is not a professional counselor
- A mentor is not a social worker
- A mentor is not a financier
- A mentor is not a playmate
- A mentor is not someone who:
  - — Breaks promises
  - — Condones negative behavior
  - — Talks down to a mentee
  - — Forces the mentee into anything
  - — Is inconsistent
  - — Becomes a crutch
  - — Expects too much
  - — Expects too little
  - — Breaks confidentiality (except in cases of potential harm to the mentee or to other people)

Bank of Boston's mentor training manual, adapted from an original handbook published by the Abell Foundation, Inc., Baltimore, MD.

Recruiting

In all cases, employees must really want to step forward and participate in the mentoring program. They must fully understand and accept the time commitment and other responsibilities that will be required of them.

Recruiting mentors takes a long time. If you want a mentoring program to begin in October and run for the entire year, you should begin recruiting mentors no later than mid-summer. The best time to begin recruiting is at the end of the previous school year (end of May, mid-June). This will help you avoid the stress of actively managing the mentoring program while concurrently engaging in the recruitment process. It also allows a sufficient amount of time for selection and orientation.

If the school year has already started but your recruitment has not, you probably should postpone the start of your program until the beginning of the second semester. It is much better to have a shorter, better-run program than it is to move too quickly and miss critical steps.

One of the best places to start is the human resources department in companies with which you already have partnerships. The department personnel can distribute notices asking for volunteers throughout the company, placing the announcements in the company newsletter, on the company's e-mail systems and on flyers displayed around the offices.

As might be expected, one of the biggest difficulties is locating enough mentors for all students. In one program, for instance, some mentors had two mentees.

Although this was functional, it was not outstanding and certainly less than ideal. To help improve the program in the coming year, the coordinator is asking each mentor who participated before to identify one or two other employees from their company who might be interested so the coordinator can send an outreach letter to them.

Mentor recruitment is a bit more complicated for mentoring programs that aren't structured around a particular industry cluster or that don't have established partnerships with particular employers. In this case, you can ask your faculty for the names of people who might be interested in being mentors. You should contact all these people, first with a letter explaining the program (and how you got their name) and then with a follow-up phone call. See **Exhibit 9-2** for Boston's pitch letter.

Another strategy is to contact the community relations or human resources department of any businesses with whom you don't yet have partnerships. Businesses close to your school might be good candidates. To start and sustain a company's commitment, you will need support from the top, so you might ask your principal to phone the company's chief executive to introduce the program. Then you can offer to make a short presentation at the work site about your mentoring program for any interested employees. (Remember to keep it short.)

Evaluating and Screening Applicants

Once you have identified volunteers, you need to screen them for acceptability — remember that not everyone who volunteers is appropriate for the program. Your eligibility screening process, which your planning group should establish as a permanent aspect of your program, should include the following components:

- A written application, such as the one shown in **Exhibit 9-3.**
- Face-to-face interviews.
- Background checks, such as a Criminal Offender Record Information (CORI), to determine if any applicants have criminal records that would prohibit them from participating in the program. In Massachusetts, these checks are performed by the Executive Office of Public Safety. You should contact your local police for information on the process and any fees involved.

Training and Orientation

Many first-time mentors are not familiar with the intricacies of teaching and dealing with adolescents. Your mentor training program should include information on the following topics:

- Adolescent development
- Working with and relating to students
- Expected outcomes of the program
- Suggested activities
- Communication procedures
- Cultural/racial sensitivity
- General contact information

EXHIBIT 9-2 SAMPLE PITCH LETTER TO POTENTIAL MENTORS

It only takes a few hours each month …

The National Academies of Boston is providing an opportunity for you to become a mentor to a high school junior or senior in the Boston Public Schools. By making a commitment of just a few hours a month, you will be joining a nationwide movement to significantly improve the future of a child.

Many adolescents lack adult role models to provide guidance and instill the self-esteem they need to succeed in their adult lives. Growing evidence demonstrates that mentoring relationships between adults and youth offer the personal care and support absent in the lives of high-risk young people.

Mentors in the fields of finance, public service and travel/tourism can introduce young people to other values, customs, resources and different occupational and social worlds. The National Academies of Boston are actively recruiting individuals from business and academia to become mentors for the 1995-1996 school year. You can make a difference.

If you are interested in becoming a mentor and would like to receive more information and/or an application, please contact:

[Name, Address, Phone]

… yet your time is priceless to a Boston youth following in your footsteps.

EXHIBIT 9-1

Mentor Application

Please fill out the following questionnaire. If you do not feel comfortable answering a question, please feel free to leave it blank.

General Information

Name ______________________________

Street Address ______________________ Apt. # ________

City ______________________ Zip Code ________

Home Phone # ______________ Work Phone # ______________

Occupation and Job Title ______________________________

Work Address ______________________________

Sex (M or F) Date of Birth ______________

With what ethnic group do you identify yourself?

_____ Asian
_____ Hispanic
_____ Caucasian
_____ African American
_____ Native American
_____ Other: ______________

Do you speak any other languages besides English? ______________________

Religious Affiliation ______________________________

Background Information

Please circle the academy for which you are applying to mentor

Academy of Finance Academy of Public Service Academy of Travel and Tourism

1) How did you find out about the mentor program?

EXHIBIT 9-3

2) Have you ever been a mentor or a Big Brother/Big Sister to a teenager?

_____ No _____ Yes (Please explain your experiences: pros, cons, etc.)

3) What involvement have you had working with teenagers?

4) Please tell why you are interested in the mentoring program and why you think you would be a good mentor. (Please use the back of this page if necessary.)

5) Do you presently or have you ever had a problem with the use of alcohol or drugs?
_____ No _____ Yes

6) Have you ever been convicted of a crime?
_____ No _____ Yes

7) Do you have any physical or mental condition which may impact your ability to serve as a mentor?
_____ No _____ Yes

I understand that by submitting this application I authorize the National Academies of Boston to make inquiries to the Bureau of Criminal Identification and the Massachusetts Department For Children and Their Families concerning my suitability as a volunteer. The information requested in this application will be used for the purpose of determining my suitability as a mentor. All information will be held in confidence.

Signature of Applicant ______________________________ Date ____________

EXHIBIT 9-3

Please list the names of co-workers or friends that you think might be interested in mentoring…

1) Name/Company ______________________________ Phone # ____________

2) Name/Company ______________________________ Phone # ____________

3) Name/Company ______________________________ Phone # ____________

References

Please list the names and addresses of three persons who might act as references.

1) Name ____

Address ____

Work Phone # ____________________ Home Phone # ________________

2) Name ____

Address ____

Work Phone # ____________________ Home Phone # ________________

3) Name ____

Address ____

Work Phone # ____________________ Home Phone # ________________

Please be advised that receipt of your application does not guarantee acceptance into the program.

Please complete this application and return it to…

[Contact name and address here.]

EXHIBIT 9.1.

Please "introduce yourself" to your mentee by writing a little bit about yourself. You can start by telling your mentee your name, where you live, where you work, and what you would like to achieve by being involved in the mentor program. Write as much as you want, but be sure to include those things about yourself that you want your mentee to know.

EXHIBIT 9-3

Favorites

Please fill out this form. You will exchange this information with your mentee.

Name ______________________________

Age ______________ Birthday ______________

Favorite type of food ______________________

Favorite kind of ice cream ______________________

Favorite movie ______________________

Favorite TV show ______________________

Favorite sport ______________________

Favorite actor ______________________

Favorite actress ______________________

Favorite musical group ______________________

Favorite book ______________________

Favorite school subject ______________________

Favorite free-time activity ______________________

Favorite restaurant ______________________

Favorite place to visit ______________________

Any other favorites you have…

____

____

____

Many training sessions are scheduled on Saturdays and at night so that mentors will not have to miss work. These sessions usually last for several hours in a given day or evening at the school or another facility with a classroom or conference room. Some employers who run their own training programs hold them at the work site, either during work hours or afterward.

Many training sessions are run by third-party providers who specialize in mentoring programs. For instance, school-to-careers programs in Boston often contract with organizations such as Greater Boston One-to-One or the Boston School Partnership to provide mentor training, although each program's coordinator still helps modify the design of the training so that it reflects the goals and objectives of the specific STC program. (The third-party providers tend to be funded with foundation grants, so the cost to schools is minimal.)

One-to-One has offices in several other cities. Our PIC also calls on community colleges to train mentors. You also may want to contact the Big Brothers/Big Sisters organization, PIC and STW offices in your area.

Your program also should provide mentors with ongoing support. The program coordinator should keep in touch with mentors to make sure they're comfortable with the program and their responsibilities. You also can hold group meetings to give mentors a chance to discuss the program and share their experiences with others.

Providing good formal training, on-going support and opportunities for mentors to get together with their mentor peers are all useful for sustaining mentor involvement and, by extension, the success of your program.

Matching Mentors and Mentees

Playing matchmaker between adult mentors and teens is an almost intuitive process, one that cannot be codified in any scientific fashion. You also have to accept that a few matches won't work.

Some programs favor same-sex matches. Others consider cultural, racial or language similarities. In some programs, mentees and mentors complete interest forms. Often teachers are involved in the matching process because they know the students fairly well — for instance, a teacher might suggest that a particularly shy student would work better with a more outgoing mentor.

Once matches have been made, it is important to have a good introductory meeting with lots of ice-breaking and trust-building activities. A relationship between a mentor and student often needs time to develop, so be willing to give that time and don't judge a relationship too quickly — an apparently imperfect match might eventually work out well, just as an apparently perfect match might have difficulties later on.

In the event that a match doesn't work out, your planning group should have plans for taking action to correct it. For instance, the two people might just need to "clear the air" by discussing a particular issue with another person or group. However, if that doesn't solve the problem, you might need to rearrange some of the matches.

Program Evaluation

After you have established program goals and desired outcomes, you will need a way to measure the success of your program. For instance, if your program is focusing on academic improvement, you must keep the necessary data to track how students are doing in class.

All participants should be allowed to offer their evaluations of the program. Both the mentee and mentor should complete written evaluation forms at several points throughout the program. For instance, in one program, after each monthly meeting mentors evaluate the program and contribute suggestions for activities and improvement. You also may want to devise a way to get feedback from teachers, parents and counselors. A sample evaluation form is shown in **Exhibit 9-4.**

MENTORING IN ACTION: EXAMPLES OF CURRENT PROGRAMS

The Academy Mentoring Program

Three Boston high schools house academies for finance, public service and travel and tourism. They employ industry-based curriculum and work cooperatively with schools and private industry.

In the academy programs, the mentoring is different from that in other STC programs. Juniors and seniors are matched with career professionals in their specific industry cluster, and they have monthly group meetings at the high schools. Each of these meetings has a "theme," such as resume writing, interviewing skills or personal cash management skills. In many respects, the theme of each meeting is not as important as just having the meeting itself because it gives mentors and mentees a chance to develop their relationship by getting together regularly and having a structured topic to discuss.

In addition to the monthly group meetings, mentors and mentees are expected to meet independently at least once a month throughout the year, outside of the school for activities like movies, sports or museum tours. Mentors are encouraged to take students to visit a local college on at least one of their independent meetings. Students also may arrange to visit their mentors at work, which may not be where the student is placed for work experience.

Mentoring is only one part of the academy program. These students do participate in paid and unpaid internships within their pathway. But the academy mentors are not involved in that component of the program and may not even work for the same company with which a student is interning. The mentors with this program tend to emphasize life skills but are encouraged to help the students focus on academics and future education. In addition, the mentors may take an "all-aspects" of the industry approach with their mentee instead of talking about a specific job. They may point out the different career pathways in the financial industry, the public service sector or the travel and tourism industry and the education one needs to pursue those careers. Obviously, if a student encounters difficulties on the job and has established a good relationship with their mentor, they can discuss the situation.

The Work-site Mentoring Program

ProTech, the multi-year, Boston STC program described in the previous chapter, also engages mentors.

Several employers in the ProTech program provide mentors for the students they employ. These mentors are not the students' work supervisors but adults from different departments within the company who have agreed to coach the student in the specifics of the work world and that particular company.

One bank runs a particularly successful mentoring program for its ProTech students. A student who begins working at the bank is assigned a mentor. At first they meet in a few introductory and ice- breaking sessions with others. Then each mentor and mentee meet once a week, usually over lunch, to chat about jobs, school and just life generally. The mentor also schedules monthly meetings with their student's work supervisor and the student to track the student's progress and resolve any work issues. This process helps keep any problems or misunderstandings to a minimum and helps the student learn how to manage work relationships.

EXHIBIT 9.4

Mentee End of the Year Evaluation

Your Name ______________________________

Your Mentor's Name ______________________________

1) How would you describe your overall experience in the mentoring program?

Excellent **Pretty good** **Not so good** **Terrible**

2) How would you describe your relationship with your mentor?

Strong **Comfortable** **Uncomfortable** **No basis for answer**

3) How many times did you meet with your mentor this year?

Never **1-3 times** **4-6 times** **7 or more times**

4) Did your mentor attend every one of the school-based meetings? **YES** **NO**

If not, what was your mentor's explanation for not attending?

5) Did you attend every one of the school-based meetings? **YES** **NO**

If not, what was your explanation for not attending? Did you call your mentor to let him/her know?

6) Did you visit a college or university with your mentor this year? **YES** **NO**

7) Did you visit your mentor's place of work this year? **YES** **NO**

8) Who made the greater effort to communicate--you or your mentor?

Yourself **Your mentor** **Both of you equally**

EXHIBIT 9.4

9) **How many times did you call your mentor?**

Never **A couple of times** **Frequently** **A lot**

10) **Now that the program has come to an official end, do you believe that you will keep in touch with your mentor?**

No **I probably won't** **I don't know** **I probably will** **I definitely will**

11) **Did your mentor have more than one mentee?** **YES** **NO**

If you answered "YES" to the previous question, how did you feel about sharing your mentor with another student?

12) **Were the school-based meetings informational for you?** **YES** **NO**

13) **What activities would you like to see as part of the mentor meetings?** (*this year's topics included--the Higher Education Information Center, interviewing skills, & budgeting skills*)

14) **What suggestions can you make to improve the mentoring program?**

Meetings with mentors and mentees helped the bank modify and improve the ProTech program. Initially, students had rotated through the bank's departments every two months to learn all aspects of the institution. Students did not feel that two months provided them enough time to master tasks and become important and necessary to each department but were initially reluctant to mention this to anyone. They didn't feel empowered enough to discuss this with their supervisors. Some felt it was just their own problem; they didn't realize that many of the students (and many supervisors) also were feeling frustrated. Eventually the students began to discuss their work schedule with their mentors, who brought this issue to the attention of the students' supervisors and the program coordinators. Now students usually work up to six months in a particular department.

Regularly scheduled meetings help to build close relationships and make students feel a part of the organization. It is confusing to have a supervisor who also is supposed to function as a mentor. A supervisor may have to point out mistakes, take disciplinary action or be too busy to engage on a personal level with their student. The presence of a mentor, whose only interest is in engaging the student, can be far more useful; they can act as a sounding board for the student and suggest effective ways of working with both the student's supervisor and co-workers.

A Middle School Mentoring Program

Programs at a middle school level will be far less industry- or career-specific and may be more exploratory than those in high schools, and there certainly will be differences in psycho-social development. But the steps you take to design your program will be the same. The following example describes a middle school mentoring program that has established academic improvement as its major program objective.

A local bank has a close partnership with a middle school just a few blocks from the bank's main building. This mentoring program matches adult employees with students who need extra academic help. When selecting students for this program, teachers consider whether the students have access to other tutoring/mentoring resources (such as Boys and Girls Clubs or other organizations) because the school wants to ensure that available resources are effectively distributed.

Scheduling. Mentors are required to make a once-a-week commitment for 26 weeks. The bank managers feel this minimal time commitment — with no night or weekend responsibilities — is attractive to employees who want to be involved but who don't have a lot of time to spare. The bank employees are paid for the time they spend mentoring during work hours.

Employees tutor students at the school for one 45-minute period each week. For instance, if the student needs extra help with math, then the tutoring occurs during the time of that student's math class.

There was a great deal of discussion about whether this schedule represented the best solution. However, the teachers decided that the one-on-one attention given to the student more than compensated for missing a class. Also, since many students cannot stay after school, this schedule represented the best way to serve more students.

Communication. Initially, communication was a nightmare. Teachers have only limited access to phones, and the school is not equipped with a voice-mail system. Teachers may have one free period a day, but coordinating that with the mentors' availability is almost impossible. Also, one teacher might have six students being tutored, which means that the teacher would have to try to maintain contact with six different bank employees.

Those problems were minimized with a low-tech solution: a mentor/teacher message board. The teachers leave notes to the mentors letting them know what areas are being covered in the class that week and in what areas their students need particular assistance. The mentors leave notes to let the teacher know of any progress made or to ask any questions. Also, a mentor newsletter goes out monthly to all mentors and teachers.

Bank employees handle the coordination of this program as part of their regularly assigned duties. At the school, the student support coordinator handles the program as part of her regular duties.

Mentor training. Mentors are prepared for their responsibilities by a local agency, Boston Partners in Education. They receive information on confidentiality issues and on physical, cognitive and psycho-social development issues for early adolescent and middle school children. They talk about issues related to achievement, and they also receive information on appropriate actions to take if child abuse is suspected or disclosed.

Each month the bank schedules a brown-bag lunch center for mentors. At these informal meetings, the mentors can discuss how things are going, get assistance on how to resolve problems they may be having and share ideas about the program with their fellow mentors. Teachers and school representatives occasionally attend these brown-bag lunches.

Mentee preparation. The Big Brothers/Big Sisters organization, which has a long history of matching kids and adults, also lends a hand in the program. Volunteers come to the school for an informal meeting that is intended to give students realistic expectations about the program. The group leader asks the students a series of questions:

- Who is one adult whom you have looked up to?
- Why did you look up to her or him?
- What is a mentor? What do you hope a mentor will be able to do for you?

The group leader uses the students' answers to build upon what they know and help them define their expectations of how a mentor can help them. There are fewer false hopes and less disappointment for students when they have realistic expectations. At the end of this session, the mentors are brought in to play several ice-breaker games with their mentees.

Results. The bank-sponsored program has been in operation for more than six years, and in 1995–1996 it served more than 65 students. In many cases, these students simply need more personalized attention to understand a particular concept in a class, and they get it with the assistance of the school's business partners. Although the goals for this mentoring program center on improved academic achievement, personal relationships do develop, and students greatly benefit from their weekly meetings with adults who listen to and talk with them.

A Mentoring Program That Did Not Work

The local affiliate of a national organization that coordinates mentoring programs offered a grant to a Boston high school if it agreed to start a mentoring program. The school contacted one of its smaller, less-involved business partners — one that had been making only a small financial commitment to the school for a few years — in the hopes of establishing a more substantive partnership. The business agreed to the plan, so the school submitted an application and was awarded a small grant for setting up this program. (The grant provided for supplies, refreshments for a year-end celebration and a small stipend for the teacher coordinating the program.)

While all of this sounded like a good idea, it turned into a fiasco. First, the proposed mentoring program was not connected to the workplace or to a specific career pathway. Also, the business partner, the school, the coordinator and the volunteer mentors all had vastly different expectations about the objectives of the program.

"I'm Not Reaching My Student"

At a recent brown-bag lunch, one mentor was feeling particularly discouraged. She felt her student was not responsive, and that made the mentor think she was not really helping the student. But another mentor shared the following thought:

"You might not realize it now, but in your role as mentor, you may be planting a seed in a child's life. Someone else may come along and water the seed, and another person may come by and nourish the seed. So while you may not be around to see the seed grow, please do not think that your efforts are wasted."

- The business partner thought the major objective of the mentoring program should be to pursue career-awareness activities with highly motivated students.
- The school's objective was to offer the mentoring program to students who were struggling with their school experience because of academic problems, suspected drug or gang involvement or erratic attendance. The thought was that mentors could give them some hope and an adult role model.
- The school's coordinator, who previously had been involved in another mentoring program, wanted to organize several "cultural" experiences, such as outings to theater productions or visits to cultural sites.
- Volunteer mentors were told that their commitment would be limited to one hour a week for half a year and would be held only at their office. Consequently, they viewed the program as a "job-shadowing" experience rather than a relationship-building program between the student and the mentor. In addition, some of the employees who had supposedly "volunteered" to participate in the program actually had been assigned by their supervisor, so their commitment was not truly genuine.
- The local affiliate that encouraged the mentoring program in the first place did not clearly articulate everyone's responsibilities.

Although the various parties weren't wrong in what they wanted to accomplish, their differing expectations destined the program to failure right from the start. Since the concept was only vaguely presented and understood, all parties involved had different perceptions (and misconceptions) about the program. The lack of preliminary planning led to little interest and poor implementation. As a result, the program only sputtered along. Students missed appointments and/or dropped out, and mentors quickly became disillusioned with the program. Everyone involved had a bad experience.

ANNE STOM *is manager of school-to-career operations for the Boston Private Industry Council.*

Such a failure is particularly frustrating because the partners initially were enthusiastic. Unfortunately, their emotional enthusiasm didn't lead to clear communication and logical planning. If the parties had communicated better about their desires and expectations, the program might have been successful — or at least they could have avoided this failure altogether by declining to participate in something that didn't interest them.

Here are some lessons learned from this program:

- If you work with organizations outside the sphere of your school and business partnership, do not entrust all of the responsibility to that third party.
- Communication has to be clear. (In this case, it was essentially nonexistent.)
- Planning is essential. The parties have to spend the time to discuss what they want to accomplish and how they will do it. The eagerness to get "something in place" will only lead to problems if the parties don't know what that "something" is.
- The expectations and responsibilities for mentors and mentees have to be clearly defined.
- All parties have to agree to the plan — and they should agree voluntarily, not because their boss wants them to.

Making a Difference

Mentoring is not a new concept but one that has increased significance in the realm of preparing youth for successful careers in today's world. You may remember an adult who made a difference in your life — a neighbor, a relative, a coach or perhaps your first employer. Someone who spent time talking with you and listening to you, taught you a skill, helped you form your ideas about the world and gave you a sense of where you wanted to go and how to get there. Those informal relationships still happen but are increasingly rare. Parents are busy or non-existent, teachers are overworked and our community social networks are fragmented.

These important links to the adult world are critical for our youth. We must continue to create formal structures such as mentoring programs that will allow these relationships to develop. To ensure that your program is a success, start small, remember to include all parties in the planning stages, establish regular communication vehicles and train both mentor and student in program expectations. Keeping those four things in focus at all times will help you create an atmosphere that supports the growth of students and mentors as well.

Chapter 10

Legal and Labor Considerations

By Alice Potosky

It offers wide opportunities and positive outcomes for students, schools and business, but the school-to-careers concept and related laws also pose several critical legal questions. When students enter a workplace under a school-sponsored program, both employers and schools have legal obligations to protect the students and guarantee the rights of the existing workforce.

Picture the scenario of hundreds of thousands of school youth going into internships, apprenticeships and other learning experiences in offices, plants and shops. It can be daunting, even off-putting, to employers and worrisome for educators. But a dose of prevention in the form of knowledge can ensure that drastic cures will not be necessary later.

Those who understand the applicable laws, the problem areas and concerns, the questions to ask and where to go for answers will be on the right track. This knowledge will help educators safeguard students' health and safety, avoid stepping on the rights of workers and stay within the framework of the law as they send students out to business and industry for school-to-careers activities.

Legal Provisions of the School-to-Work Opportunities Act of 1994

A wide range of programs falls under the STWOA umbrella, such as internships, apprenticeships, paid and unpaid work experiences, job shadowing, school-based enterprises, workplace mentoring and much more. The key lies in determining when a work experience is or is not classified as employment.

Title VI, section 602 of the act lists several requirements, which are paraphrased here:

1. Students may not displace any current employee.
2. Students may not be placed in positions where a worker has been temporarily laid off or in positions that were previously affected by reductions in force.
3. School-to-work programs may not impair existing contracts for services or collective bargaining agreements.
4. Students must be provided with workplaces that meet safety and health

requirements under federal, state and local law.

5. School-to-work programs must not violate any person's civil rights.
6. Students in school-to-work programs must be given adequate supervision by skilled adult workers.
7. No portion of the funds allocated under the school-to-work act may be used to provide wages for students.

The restriction on use of funds for wages relates to how the Departments of Education and Labor envisioned the use of grant money — they wanted to encourage business people to invest in school-to-work, not just accept a free worker because someone else would pay. The supervision requirement addresses the need to connect the work-based experience to the student's program of learning. Adequate supervision will enable students to achieve certain educational outcomes through the work-based experience and assure the quality of the experience.

The first three prohibitions reflect the concerns of workers, who are significant stakeholders in the success of school-to-work systems. Their inclusion underlines the rights of workers under employment law and union agreements and makes it clear that the federal law does not alter them.

The statements on safety and health and civil rights remind educators and employers that students in these programs are guaranteed the same rights and protections as other workers.

The Fair Labor Standards Act

It will come as some relief to both employers and educators that participation in a school-to-work initiative carries no *additional* compliance obligations under the Fair Labor Standards Act. Working with students in school-to-work programs is similar to working with other minors when it comes to complying with the law.

The FLSA was enacted to protect the rights, safety and well-being of all workers in the United States. The act contains the federal child labor provisions. The laws and regulations restricting youth employment include various exceptions and special conditions. Some of the most common ones involve youth in "learning situations."

The question is: When is a school-to work activity a learning experience and when is it employment, as defined by the FLSA? As with many legal questions, it depends. While all work experiences under school-to-work programs are learning experiences, not all learning experiences will be viewed as work under the FLSA.

First, the STWOA describes four elements that a learning experience must incorporate:

1. It is planned. Job training and work experience, appropriate to the student's abilities, coordinate with a school-based learning component and lead to a skill certificate.

2. It is sequenced. Activities build upon one another with increasing complexity and result in mastery of basic skills.

3. It is structured. The program exposes the student to all facets of the industry and develops broad, transferable skills.

4. It is real-world. Students perform real or simulated tasks that develop higher-order critical thinking and problem-solving skills.

If any of these four elements do not exist, a student may be an employee under FLSA.

Next, you must determine whether the learning experience fits the FLSA definition of employment. There are four criteria involved, and unless the learning experience meets all four, FLSA will categorize the student as an employee (and subject to the act's FLSA provisions).

1. The student receives ongoing instruction at the employer's work site, where he or she is closely supervised throughout the experience. The employer's responsibility to train and supervise the student offsets any productive work the student performs.

2. The student's placement at the work site does not result in the displacement of a regular employee, whether through a lay-off, failure to hire an employee it would have hired otherwise, or decreased working hours for current employees.

3. After the learning experience, the student has no *rights* to a job. This does not, however, preclude employers from offering employment to students.

4. The employer, student and parent or guardian understand that the student is not entitled to wages for time spent in the learning experience. Students may accept a stipend for actual expenses.

If *all four* criteria are met, an employer does not have to pay wages to a student in a learning experience. If a student receives no wages, then the experience is not employment as defined by FLSA and subsequently does not fall under the FLSA provisions. Child labor laws would not apply, either; however, the National School-to-Work Office urges STW systems to abide at all times by child labor laws as they apply to hazardous working conditions (see the Hazardous Occupations box on page 154).

Activities such as career awareness and exploration, field trips to places of employment, job shadowing, class projects and many others do not constitute employment and do not fall under FLSA provisions.

Conversely, if a learning experience does not meet all four criteria above, FLSA considers it an employment relationship. The FLSA then applies if the employer is an enterprise engaged in interstate commerce with gross revenues over $500,000 or is a public agency. This covers most situations since ordinary activities such as handling out-of-state mail and making or receiving out-of-state telephone calls qualify as interstate commerce.

If there is any question about whether a situation falls under FLSA, it's wise to get a ruling from the regional Wage-Hour Office **(see Exhibit 10-1).**

EXHIBIT 10-1 REGIONAL WAGE-HOUR OFFICES

BOSTON REGION

Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

Wage-Hour Division
Room E245, JFK Federal Building
Boston, MA 02203
PHONE: (617) 565-2066
FAX: (617) 565-3700

CHICAGO REGION

Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin

Wage-Hour Division
230 South Dearborn St., Room 820
Chicago, IL 60604
PHONE: (312) 353-7280
FAX: (312) 353-2539

NEW YORK REGION

New Jersey, New York, Puerto Rico, Virgin Islands

Wage-Hour Division
201 Varick St., Room 750
New York, NY 10014
PHONE: (212) 337-2000
FAX: (212) 620-6957

DALLAS REGION

Arkansas, Colorado, Louisiana, Montana, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, Wyoming

Wage-Hour Division
Federal Building, Room 800
525 S. Griffin St.
Dallas, TX 75202
PHONE: (214) 767-6897
FAX: (214) 767-2730

PHILADELPHIA REGION

Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia

Wage-Hour Division
Gateway Building, Room 15230
3535 Market Street
Philadelphia, PA 19104
PHONE: (215) 596-1185
FAX: (215) 596-1479

KANSAS CITY REGION

Iowa, Kansas, Missouri, Nebraska

Wage-Hour Division
City Center Square Building
1100 Main St. Suite 700
Kansas City, MO 64105-2112
PHONE: (816) 426-5386
FAX: (816) 426-3482

ATLANTA REGION

Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee

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A simple rule of thumb may be used: If the situation involves wages or compensation, an employment relationship exists. This means student employees covered by FLSA must earn no less than the federally established minimum wage, receive no less than one and one-half times the regular rate of pay for each hour worked in excess of 40 hours in a given week and conduct the employment work in accordance with child labor laws.

The National School-to-Work Office recognized the potential for confusion over the STWOA and how it relates to labor laws, so it put together and distributed a technical assistance guide (see resource list at end of chapter). The guide explains in lay language the FLSA and STW programs and is available on the Internet at http:\\www.stw.ed.gov.

Child Labor Laws

FLSA and state regulations detail the primary legal constraints on the employment of minors — children 17 and younger. FLSA specifies strict limits on the employment of minors and spells them out for these age groups: under 14, 14 to 15 and 16 to 17. In addition, each state has its own restrictions. Where there are differences between federal and state law, the more protective provision applies. For specific state requirements, check with your state labor department or employment agency.

Under the STWOA, no waivers of FLSA child labor provisions are permitted.

In general, child labor regulations stipulate:

- Minimum ages for general and specific types of employment
- Prohibitions on working during night hours
- Prohibitions on certain kinds of hazardous employment
- Registration of minors in employment
- Maximum number of hours that can be worked on a daily and weekly basis

Age Matters

For children under 14, most work defined as employment under FLSA is prohibited. There are some exceptions: Children may work at any age as actors or performers in motion pictures, theater, radio and television products; for their parents if they are sole owners of a business in occupations other than manufacturing, mining or hospital services; and as newspaper sales and delivery workers. They also may do work not covered by the FLSA (work not considered employment, such as job shadowing).

Fourteen- and fifteen-year-olds may work in specified occupations outside school hours and between 7 a.m. and 7 p.m. (extended to 9 p.m. between June 1 and Labor Day). They cannot work more than three hours in a school day and 18 hours in a school week, nor more than eight hours on a non-school day and 40 hours in a non-school week. Sixteen-year-olds may be employed in any occupation other than the hazardous occupations noted earlier. Those 18 and older may

Hazardous Occupations

The FLSA stipulates the following occupational activities as hazardous and prohibits children under age 18 from performing them:

1. Exposure to radioactive substances
2. Manufacturing and storing explosives
3. Manufacturing brick, tile and kindred products
4. Coal mining
5. Mining other than coal mining
6. Power-driven woodworking machines
7. Power-driven bakery machines
8. Power-driven paper products machines
9. Power-driven metal forming, punching and shearing machines
10. Power-driven circular saws, band saws and guillotine shears
11. Power-driven hoisting apparatus
12. Wrecking, demolition and shipbreaking operations
13. Roofing operation
14. Excavation operations
15. Logging and sawmilling
16. Slaughtering or meat-packing, processing or rendering
17. Motor vehicle driving and outside helper

There may be other prohibited activities, and further restrictions are in place for children under 16. Consult with the local Wage-Hour Office or Minor Laws of Major Importance, listed in the resources section at the end of the chapter.

work in any occupation for any number of hours, although individual state requirements may be more restrictive.

Safety and Health

Raising sensitivity and awareness of health and safety issues ranks high on the list of priorities at the National School-to-Work Office. In an advisory letter to STW participants, Director JD Hoye urged schools and workplace to go beyond the legal objectives of compliance to design systems that will lead to lower rates in injury for students on jobs.

Citing an article in the *American Journal of Public Health*, Hoye relates some startling statistics. Five thousand kids per month wind up in hospital emergency rooms for treatment of occupational injuries. Lacerations, particularly of the hand or finger, are the most common injury. Retail employment has the highest occupational injury rate among adolescent workers. Despite child labor laws, the average annual death rate due to occupational injury for 16- and 17-year-olds is *not* significantly lower than the rate for adults 18 and older. Workers 16 and 17 appear to be at greater risk than adults for death by electrocution, suffocation, drowning, poisoning and natural and environmental factors, such as lightning.

Hoye advocates "awareness training" as part of the school-based learning component of STW. "Students should be able to describe the general nature and types of work-related health problems, the risk factors associated with the most common jobs held by young workers and the concept of hazard control strategies. Employers need to provide specific training, enabling the student to understand specific tasks or operations that pose risks; proper use of tools, devices and equipment to control risks; and procedures for responding to potential hazards and for reporting illness and injury," says Hoye.

The National STW Office suggests that school and employer partnerships address the following four questions as a preamble to designing a system that ensures students' safety and health:

1. How will potential risks be identified? Who will be responsible and what should their qualifications or experience be?
2. What information will be provided up-front to students and parents? Who will determine what is "too risky?"
3. Do the written agreements between schools and employers address health and safety issues and clearly define roles and responsibilities?
4. When federal or state law does not apply, will you allow a student to participate in a hazardous activity that would be prohibited if the law applied?

A Strategic Approach

Merely understanding the law and knowing what rules apply to what situations may not fully protect the school, students and employers from harm and liability. That's why it's important to design an approach that raises the correct issues and references the experts who can provide advice.

Thinking through the issues rather than waiting to be surprised at what comes up will take STW partners a giant leap forward in overcoming any would-be obstacles. Involving all stakeholders in up-front discussions is an appropriate first step. An advisory structure composed of legal counsel, business officials, labor representatives and Department of Labor staff, among others, can help lay out a framework and process for compliance with the law and ensure that the work experience of students is a welcome opportunity for business and labor.

States across the nation are developing different strategies and approaches to address legal and labor issues. What follows are three examples that illustrate diverse approaches that are working.

Vermont: An Up-Front Strategy for Risk Management

The state's Department of Employment & Training, which manages grants for school-to-work initiatives in conjunction with the governor's office and other agencies and partners, formed an ad hoc Risk Management Committee. Its charge was to research questions about accident, general liability, catastrophic and transportation insurance in addition to licensure requirements and workers' compensation. The committee comprises representatives from state government in education, employment and training, workers' compensation, risk and risk management. Other members include a regional STW coordinator and staff from an insurance agency, a non-profit corporation and a regional Economic Development Corporation.

Driving the committee was the concern about an onslaught of incomplete or misinformation about work-based learning, and that schools, youth and parents seemed unaware of the risks they might be exposed to. The approach was to cut off problems at the pass. If the committee could educate people to raise the right questions at the right time to the appropriate parties, then problems would be minimized. Including the right people in discussions at the local level is key as well. For example, since the business manager of the district knows the budget and has experience with insurance matters, he or she needs to be closely involved.

Out of the committee's work came a four-page information piece in a question-and-answer format. Members view it as the first in a series, as they anticipate further questions from the field as the STW system evolves. It was distributed to coordinators of STW programs, who shared it with employers as part of a multi-pronged dissemination effort that also includes meetings, workshops and publication development. Its 14 questions cover the whys and wherefores of work-based learning as well as pointed and practical information. Here's a shortened version of some of the questions raised and answers given:

Stop-Loss Example: How accident and catastrophic insurance work together

A student who is covered for off-site participation in the school's basic accident insurance policy goes into an unpaid school-to-work activity at a workplace. He or she suffers a major injury after falling down a flight of stairs, but no gross negligence is involved. The medical and associated bills amount to $75,000. The voluntary accident policy pays the maximum benefit of $25,000, at which point the catastrophic insurance kicks in to take care of the remaining $50,000.

Q: Does the school's general liability insurance cover all insurance-related matters?

A: Not necessarily. Liability covers only negligence, so it does not apply to all accident and medical situations. Negligence exists when a duty is owed to another and an unintentional breach of that duty results in physical injury or property damage. Liability premiums depend on the level of risk in the covered activities, number of people covered, type and purpose of facility and amount of past claims paid.

Q: How can we supplement liability insurance?

Adding basic voluntary student accident and student accident catastrophic insurance will provide comprehensive protection to schools and students involved in unpaid work experience.

Q: What is basic voluntary student accident insurance?

A: This is offered to students but generally not required (although for certain activities such as sports, accident insurance may be required). Parents of students do not always purchase accident insurance because they believe they are adequately covered by their own health plan, they can't afford it or are not aware they need it.

Q: Does our existing voluntary student accident insurance provide coverage under a "school-time-only" plan for students in unpaid work experience?

A: Get the answer in writing from the insurance company. Normally this type of insurance requires that students be at the school site or under direct supervision of a school employee, unless the policy specifies otherwise.

Q: What is student accident catastrophic insurance?

A: It serves as a stop-loss in case of a major injury. Voluntary accident insurance has maximum benefits up to $25,000, $50,000 or $100,000. Catastrophic insurance has much higher maximum benefits, up to $1 million or $5 million. Policies also will carry a significant deductible that assumes the insured has a basic accident insurance. Also, catastrophic insurance covers all students, not just those participating in sports, clubs or school-to-work programs.

Q: How can schools lower the expensive premiums of catastrophic insurance and cover only those students who truly need it?

A: Schools may join together to purchase a single policy that covers students participating from each school. Each school then pays an amount based on its proportion of students covered by the plan.

Q: Are teachers who use their own vehicles to drive students from activities covered under liability insurance?

There are differences in coverage when using a school-owned vehicle versus a personal vehicle. Consult with school officials to find out how your policy is written. (These laws also vary considerably from state to state.)

Michigan: A Cross-Cutting Approach to Risk Management

While the Vermont example shows how that state is bringing education partners up to date on liability issues and risk management, Michigan provides a model to help business partners control their risks. Leaders there stress the need to develop such plans at the local level with the involvement of all STW parties.

Anticipating business concerns about the risks associated with STW, the Michigan Department of Education's Office of Career and Technical Education took action. Under a performance contract with the Saginaw City School District, it developed a risk management guide aimed at business and industry partners. *A Guide to Work-Based Learning: Business and Industry Risk Management Plan,* published in September 1996, contains practical information and advice to business and industry involved in work-based learning programs.

The authors identify potential problems and provide guidelines for developing solutions through a concise package of information, sources, tools and ideas for risk management. The document has found wide distribution throughout the state to schools and businesses. School partners use it to help business and industry partners understand the regulations and how to create a risk management plan to control their risks.

The first section of the guide is a review of federal and state regulations in easy-to-understand terms, and it covers compliance and liability issues surrounding child labor, safety and health. To put the laws in context and make them more meaningful, an accompanying chart describes many different work and learning situations and differentiates between those in which students are paid employees and ones where they are unpaid non-employees. This chart features common examples so users can quickly determine whether a particular circumstance falls under FLSA and Michigan OSHA.

The guide encourages individual businesses to put a risk control plan in place that includes guidelines and outlines policies and procedures designed to limit the frequency and severity of injury and property damage. The guide lists several outcomes of preparing and following such a plan:

1. Students will know what to expect on the job. A position description is provided and students go to the work site confident that they will be treated with dignity and respect.

2. All parties know their roles and responsibilities because they have been clearly identified and communicated. Training agreements, training plans, permission slips and other documents specify responsibilities.

3. When they arrive at a work site, students have the necessary skills and knowledge to perform assigned duties properly and safely.

4. Students are able to recognize hazards and know the procedures for reporting problems and suggesting changes.

5. Work programs are designed and operated with a watchful eye on forestalling any danger to students and complying with federal and state laws.

A section on risk financing offers advice on insurance coverage and recommends that several types of insurance be in place:

- **Injury to participants.** This covers participants injured at the work site who need medical attention. If they are considered employees, the expenses normally will be paid by the workers' compensation policy. For non-employee students, parents' or guardians' health insurance policy usually will pay

- **Coverage for lawsuits.** The company's general liability policy takes care of claims and legal defense against most lawsuits, but they do not ordinarily cover student visitors, volunteers and certain unpaid trainees. Businesses may want to expand the coverage to these groups.

- **Workers' compensation.** Paid participants who sustain injuries that arise out of and in the course of employment are covered under workers' disability in Michigan. Employers who have either one full-time or three part-time workers must carry this insurance. Unpaid trainees and volunteers who are performing service (working), even without compensation, also may be covered. This would be determined case by case. The act also protects employers by limiting their liability. After benefits are paid, the worker may not file additional lawsuits.

Businesses can employ various "liability shields" to protect their financial well-being. Shields assign responsibility to another individual or organization in case of accident or property damage and they lessen the possibility of a lawsuit. **Waivers** are not a viable shield, not only because waivers relating to labor laws are explicitly disallowed by the STWOA but because courts seldom allow them to stand. There are other options, however, that can make the burden on business easier to bear:

- **Permission slips** inform guardians about the nature, location and detail of an activity, normally a field trip or job shadowing activities.

- **Consent forms** let the participant and parent or guardian know the risks involved. Their signatures indicate that they understand the risks and agree not to bring a lawsuit resulting from risks identified in the document. Although generally upheld by the courts, consent forms do not relieve a company from responsibility for negligence.

Both permission slips and consent forms serve as protections in the sense that an informed parent who has signed such as document is less likely to file suit.

- **Indemnification agreements** shift the financial burden for injuries and damages from the business to another organization, which must have both an insurance policy and adequate funds to honor the agreement.

Finally, the guide strongly recommends that business owners and managers have legal counsel and risk management experts review the plan.

Oklahoma: A Hands-On Tool for Local Partnerships

Of all the steps in building the STW system, Oklahoma considers legal and labor issues among the most challenging. The state devoted an entire module to the subject in its series, *Implementing a Local School-to-Work Partnership.* The STW Division of the Department of Vocational and Technical Education had created a technical committee to respond to questions about child labor laws, work-site restrictions and other legal and labor issues. The committee included attorneys, organized labor representatives, a judge and staff from government offices — wage-hour, workers' compensation, state insurance department, JTPA and employment security.

Legal and Labor Considerations, a series of 15 how-to modules covering all aspects of creating and managing a school-to-work system, is largely the work of the committee. It is specifically designed around the Oklahoma STW model. Each module explores a variety of suggested activities. Because each local initiative is unique, readers are urged to customize activities with STW partners, adding and deleting to accommodate local needs.

In addition to covering to the federal labor standards and child labor requirements (which, being more stringent that state statutes, are the ones that apply), the module explores liability, equity and safety.

The authors stress that the federal school-to-work law does not create new causes of action, increase the amount of potential damages or change the responsibility of any STW partners. Having said that, they define legal terms such as tort and negligence. A school's liability can result from injury to the student or injury to a person or property caused by the student. The institution—not individuals—would be liable. This would apply to situations that involve employees of a school-based enterprise. For off-site employers, the liability depends on whether the student is an employee or an "invitee." Workers' compensation benefits would cover damages involving student employees. Non-employee students may bring a lawsuit. Employers do not incur greater liability with students than with other non-employees and can protect themselves through private insurance.

To overcome reluctance of potential employer-partners who are concerned about student safety, the module offers guidelines for an occupational safety and health program. More detailed resources are available from the Oklahoma Department of Vocational Technical Education.

The section lists several steps that each STW partner — employers, parents and educators — can take to protect student workers. Here are some of those steps:

Employers should:

- Provide training for students and routinely verify that they are able to recognize hazards and are competent in safe work practices.
- Evaluate equipment that students operate, ensuring that it is both legal and safe for use.
- Assess and eliminate the potential for injury or illness associated with tasks students perform.

Educators should:

- Talk to students about safety and health hazards, including their rights and responsibilities.
- Check to make sure that STW work sites are safe and healthful environments free of recognizable hazards.
- Ensure that STW learning experiences incorporate information about employee legal rights and responsibilities, as well as training in hazard recognition and safe work practices.

Parents can join in the safety effort simply by taking an active role in the employment decisions of their children. They should discuss the types of work involved and the training and supervision provided by the employer or the school.

The module devotes a section to equity concepts in education and employment, emphasizing that all STW partners must commit to guaranteeing equal access and treatment to all students regardless of race, color, national origin, gender and disability. Freedom from harassment — specifically sexual and racial harassment — is mandated by the federal law as part of the safe environment for students.

After a brief overview of specific civil rights laws, the authors describe the roles that various stakeholders must play in making sure that students' civil rights are not violated during STW activities. Students, parents and mentors should know what laws exist to protect the student and how they apply. Employers must offer equal access, equal treatment and freedom from harassment. If a student in a federally funded program is denied access to, or full participation in, a business or industry because of race, gender or disability, the civil rights laws and penalties will apply. If a student complains to a teacher about possible civil rights violations, the teacher is responsible for reporting the complaint. If the complaint is not reported, the teacher may be liable for damages under a civil rights claim.

School-to-work coordinators are responsible for ensuring equal access and must know how to apply civil rights laws in specific situations. They should communicate these laws when entering into agreements with STW partners. The guide suggests that this statement be included in written documents: "The school-to-work partnership will accept, assign, and otherwise treat students-learners without regard to race, color, national origin, sex or disabilities." STW coordinators also should monitor activities for compliance and see that all participants have access to a grievance resolution procedure.

Shoulder to Shoulder with Labor Partners

Partners will not be able to sustain an effective STW program without addressing the concerns of workers objectively. Schools must adopt a new mindset that recognizes these issues as the broad concerns of all employees rather than the narrow interests of unions. Organized labor leaders believe all workers face the same issues regardless of whether they are unionized.

The Mandate and the Need

Although there are many groups that ***may*** be included in local STW partnerships, there are five groups that absolutely ***must*** be involved, and employee groups are one of these. According to Section 4(11) of the STWOA, local school-to-work partnerships must include employers, local education agencies, postsecondary institutions, local educators and labor organizations or non-managerial employee representatives. The federal law stresses that employers and employees are equal partners with education in the full range of local implementation activities.

While employers typically make the initial commitment to support the work-based learning program, it falls on the workers to teach and guide students through the experience. Therefore, the success of the program depends largely upon front-line workers' commitment. Obviously, then, securing employer partners alone is not enough. Union and non-managerial employee representatives must be thoroughly engaged from the beginning in the design and administration of work-based learning programs. To secure their active involvement and support, schools need to demonstrate an honest and open commitment to recognizing the rights, concerns, resources and possibilities that employee groups bring to the table.

Labor Advantages and Resources

Employees are uniquely able to perform a key role in building systems and reshaping the workplace so that it can serve as a learning place for students. They also can help develop and lead training programs, not only on job skills but also on critical areas such as workplace health and safety.

Unions in Action

Organized labor's national structure and resources help solidify an influential role for workers in STW partnerships. Local leaders have both the local and national organization behind them to help ensure that labor needs are adequately addressed and that there is follow-through at the work site.

Unions offer a unique type of access to the world of work. They are important stakeholders that can provide entry into many workplaces because of their established collective bargaining relationship with employers. Through their experience with employers and the clout they may carry, they can become powerful advocates for school-to-work initiatives.

Some early STW systems demonstrate the leadership role that unions are taking in launching and sustaining exemplary initiatives.

- The Communications Workers of America and U.S. West developed an apprenticeship model linked to secondary and postsecondary institutions.

- The Job Skills Partnership Program provides students with opportunities to work in the utilities industry side by side with mentors. It involves Southern California Edison, the Utility Workers of America and the International Brotherhood of Electrical Workers.

- The United Auto Workers (UAW Local 659) initiated the Manufacturing Technology Partnership in Flint, Michigan. It has grown to include more than 20 other area manufacturers that provide work-based learning opportunities. The program welcomes juniors and seniors in 21 districts and specifically recruits young women, who comprise 40 percent of participants.

These and other apprenticeship programs across the country are designed to help students find jobs in skilled trades by passing certain tests. Under Section 215 (b)(4)(k) of the STWOA, local school-to-work partnerships may use federal and state funds for establishing or expanding school-to-apprenticeship programs in cooperation with registered apprenticeship agencies and sponsors.

A grant to the Human Resource Development Institute (HRDI), the AFL-CIO's education and training arm, is helping to strengthen the participation of organized labor in STW activities by building ties between schools, unions, training and job opportunities. The HRDI also is assisting unions that want to create STW opportunities for students in their communities.

The Concerns

Labor concerns sometimes have been misrepresented by framing them exclusively in terms of workers' rights and job security. However, the AFL-CIO says that its concern for students' rights and protections in the workplace under FLSA is just as important as its concerns over displacement, replacement and infringements of collective bargaining agreements.

With the continuing trend toward "downsizing" companies, it's important to make sure that regular employees do not feel threatened with displacement or replacement by the implementation of school-to-work programs. Bringing workers to the STW table helps assure them that their rights will be safeguarded. Displacement and replacement are sensitive issues often subject to varying interpretation.

There are some clear-cut situations where students should not be employed. They may seem obvious but bear repeating. If workers are out on strike, student employees should not be sent to the site. Likewise, if workers are on layoff with rights to be recalled, it would be inappropriate to allow students to work there.

Procedures for handling Family and Medical Leave Act and other temporary absences are normally spelled out in the union agreement. Employers have the right to hire temporary and seasonal workers and labor unions do not typically have a voice in those hiring decisions.

On the other hand, many situations fall into that gray area. Take the example of a growing company. Perhaps it is employing paid student interns. Is this preventing it from hiring as many regular employees as it would need without the students? What if overtime pay, upon which some workers depend, is cut back because of the students' presence? This is particularly problematic when a work site employs more than one student at a time. If any of these red flags appear, schools need to respond by defining the student's work experience, in concert with labor union and employee association representatives, to guard against the replacement issue.

Labor's justifiable concern is that some employers may take advantage of school-to-work programs to access a free or very low-cost source of labor that can replace regular employees. Schools can prevent this by strengthening the educational component and providing variation in the student's experience to eliminate the possibility that a succession of student placements will serve as a revolving door for what is a regular, permanent position. Schools must honestly scrutinize employers to weed out the few who may be circumventing the law for their own benefit.

The bottom line for unions is that the student's work experience must not adversely affect any of the agreements in their union contracts.

Unionized vs. Non-unionized Work Sites

Student workers who enter a union work site automatically benefit from the safety and health guarantees under the protective umbrella of the union agreement. This experience in itself will provide valuable insights for students and a good preparation for those who ultimately become part of a unionized industry.

In non-union work settings, schools must go to all lengths to include non-managerial representatives from the workforce in the local partnership and in individual work-site programs. School recruiters and placement coordinators must follow through by making sure that when additional work sites are added to co-op, internship and other job training programs, these representatives are included. Without

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employees' support and willingness to take students under their wing, activities such as job shadowing and mentoring will be ineffective tools and students will not reap the full rewards of their work-based learning.

The best way to help enforce compliance with labor laws in a non-union workplace is to come up with a checklist, working with the employee representative, that covers STWOA and FLSA provisions. Just visiting the work site can reveal volumes about safety and health concerns. Local and state offices may hold records of civil rights and OSHA complaints and placement coordinators may find it worthwhile to check with them.

Teachers, students and placement coordinators need to understand when they go into a unionized work site that they are entering a structured system that has sustained workers over many years. It is the result of a long history of discussion and negotiation.

Understanding the non-union site is equally, if not more, important. Imagine you work in an industry where there already have been layoffs and more loom on the horizon. Plant closings, restructuring and other actions have made employees jittery. Now a student worker comes into your plant or office. You may not be secure about your own job, yet you are asked to mentor the student or allow him to shadow you on the job. You know he earns less than you. It would be difficult not to feel a bit threatened in this situation. A little understanding and assurance from school partners and business owners and managers can go a long way toward mitigating those fears.

The most successful STW partnerships will find a path of mutual respect and understanding, leading to a true partnership of trust between school, business and the workforce.

Adopting the Right Perspective

Complying with the legal provisions of the federal school-to-work laws is a necessary first step, but if the issues are seen only from a legal viewpoint, the school-to-work partnership will not reach its full potential. Business, labor and education need to work together to deal with practical matters and to make compliance workable and beneficial for everyone involved. Herein lies yet another reason for a close relationship and open communication between workplace partners and the schools. As leaders find creative ways to work within the regulations, they will build systems in which all students can benefit from STW activities without undue peril or risk to them or the STW partners.

In addition to educating students, schools shoulder the responsibility for students' health and safety at school or in a work experience site. The laws are there to protect children and guarantee workers' rights. Educators and business leaders who think of the law as a tool to help them protect students and workers will be that much ahead.

Laws were not enacted to thwart the efforts of those who are implementing school-to-work programs. What some may see as barriers often are mere misperceptions rather than real obstacles. If addressed up-front, by galvanizing the partnership's joint resources, potential problems can be avoided. Only then can schools, businesses and labor create exemplary models of STW systems that help students achieve a successful transition from education to the world of work.

Note:

This chapter provides a general overview of the legal concerns surrounding school-to-work programs and is not meant to be an official interpretation of the law. Consult legal counsel or the appropriate state or federal agency for specific rulings.

Resources for Further Information

The following publications may be obtained through the numbers indicated:

The ***National School-to-Work Learning and Information Center***, operating since 1995, is the focal point of technical assistance and outreach efforts for STW programs. The center uses the latest information technologies to function as a national hub for collecting and disseminating information on STW activities. Its customized services are available to state and local STW partnerships, employers, schools, labor organizations, parents, students and the general public. Call (800) 251-7236 or (202) 401-3129.

School-to Work Opportunities and the Fair Labor Standards Act: A Guide to Work-Based Learning, Federal Child Labor Laws, and Minimum Wage Provisions, National School-to-Work Office, Washington, D.C.; 1995. (800) 251-7236. This publication also is available online: http://www.stw.ed.gov

Minor Laws of Major Importance, Academy for Educational Development and National Institute of Work and Learning, Washington, D.C.;1994. (202) 884-8186.

Getting to Work: A Guide to Better Schools, National Center for Research in Vocational Education, University of California, Berkeley; 1995. (800) 637-7652.

Involving Organized Labor in School-to-Work Initiatives, Human Resource Development Institute (HRDI), AFL-CIO. Available February 1997. (800) 842-4734.

School-to-Work: Making the Labor Connection —A Handbook for Unions and Members, Human Resource Development Institute (HRDI), AFL-CIO. Available February 1997. (800) 842-4734.

Chapter 11

The Roles of Policymakers and Public Officials

By Randy Dorn

Complaining about politics is an age-old practice. Engaging in a vigorous debate about issues and the people who vote on them ensures the health of a democracy. What's not healthy is complaining on the sidelines without ever getting involved. Everyone should be involved in politics because decisions of lawmakers affect personal and professional lives.

Policymakers make their decisions based on the best information they have available to them. If you don't like their decisions but didn't take the opportunity to become involved by offering relevant information, you can't blame them for making what you may consider lousy choices and decisions.

My own involvement in the school-to-careers movement started when I became aware of its aspiration to include all students — which is a critical element of any education reform effort. Part of this awareness crystallized in my third year as a Washington state legislator, when two vocational-technical education advocates — Tom and Kathleen Lopp — visited me at the elementary school where I was principal.They had been disappointed by what they perceived as a lack of support for vocational education in the state legislature, of which I was a member, and they were looking for a champion.They thought I might be interested because I was an elementary school principal and had been a former teacher, high school principal and part-time vocational director. Their 15-minute appointment turned into a three-hour discussion of the similarities in the teaching styles of vocational and elementary educators, both of whom focus on applied and integrated learning.

I chaired the state's education committee, served on the appropriations committee, worked well with legislative leaders and had contact with school-to-careers advocates such as Tom and Kathleen. Consequently, I was able to help make school-to-work a component of our state reform legislation, win passage of several school-to-work programs such as equivalency accreditation and secure millions of dollars in support of the school-to-careers movement.

Federal Policymakers

All educators can find champions for school-to-careers programs. It's easy to get behind an idea as sound and as logical as this one. First, though, a legislator has to know about its existence. Getting started requires a little working knowledge of political procedures.

Congress must consider so many issues, both national and international, that members do not have the time or resources to study each of the thousands of bills introduced every year. Consequently, on the federal level, staff members become critical. Since there are so many committees at the federal level, your elected officials might not be on education and labor or appropriations and budget committees. Even if they are not on these committees, they still vote on the bills once they pass the committee stage and are on the floor for consideration.

On funding issues, Congress works from a regulated calendar, so each year the critical times to make contact remain about the same. There are three committees that handle fiscal issues: the authorization committee, which makes recommendations to the budget and appropriations committees from January to March; the budget committee, which receives requests and, by April 15, is responsible for preparing the budget; and the appropriations committee, which meets from January to September and is responsible for passing bills that actually allot money for governmental programs each year.

While it is important to meet with members of your congressional delegation to discuss issues, it is critical to spend more time with staff members. Unless you have established a personal relationship with an elected official who will respond directly to you, it is a good bet that your best route of influence is to get to know the staff members — both those in Washington, D.C., and in district offices.

For example, members of the Washington Vocational Association (WVA) were able to interest one of their representatives in a piece of state legislation to allow certain vocational-technical education courses to meet college entrance requirements. The congressman had a staff member research the federal Higher Education Act to see if the state issue fit within the federal parameters. He then drafted a floor amendment, which was passed. Because of this contact, the staff member always called the WVA to ask for opinions on relevant issues. When the staff member later took a position in the office of one of Washington's senators, he continued the same relationship with the WVA.

This relationship is beneficial to both parties: the WVA has access to an elected official, and the staff member has access to information and opinions on what is happening in the state. Through this contact, the American Vocational Association was invited to a special closed-door meeting with the senator, which provided AVA with another avenue for influence. Because of this good working relationship, the senator felt confident in recommending that a vocational-technical education student be involved in the President's Drug and Alcohol Conference. The senator's office worked with the WVA to select a student, and Washington was the only state to have a high school student as its representative at the conference.

Elected federal officials also influence state policy through their relationship with the governor. With that in mind, be sure to help keep your federal representatives informed of happenings in the state.

Governors

As the supreme executive power of the state, the governor can be a primary force for decision-making. The governor is responsible for appointing heads of departments, agencies and institutions. Also, the governor serves as an ex officio member on numerous boards and commissions. It is critical to try to influence the governor before he or she appoints people to such boards, especially workforce boards, Private Industry Councils and college boards of directors.

The governor is a key player in determining the regional structures for school-to-careers programs. Recent legislative proposals would give governors considerable control and flexibility in the use and distribution of funding and resources for education and training. As the focal point of government for the state, the governor sets priorities and influences state policy. The governor usually submits the first fiscal recommendations to the legislature and works to ensure his priorities are reflected in the final state budget. It's critical for legislators, organizations and private citizens to try to work with the governor to influence the agenda, which will in turn filter down through other state agencies and organizations.

In addition, by making your issues a priority for the governor, those issues will get substantial media coverage because the press follows every move made by the state's highest elected official. For example, because Governor Tommy Thompson of Wisconsin has made school-to-work programs a priority of his administration, such programs get increased exposure from the extensive media coverage surrounding him.

You also should try to work closely with the National Governors Association (NGA), which has tremendous influence at the federal level. Its recommendations receive a high priority and often are often incorporated into legislation.

The Education Chief

Whether elected or appointed, the chief executive officer of the state education department is the key administrator and spokesperson for the state's education establishment. The chief state school officer makes the first proposal for the education budget, works on the issues with legislators and then allocates funding once the legislature passes a budget. If the education chief is surrounded with experts in all the different aspects of education at the cabinet level, education programs will benefit from informed decisions. If, on the other hand, these positions are filled with political appointments, expertise might be in short supply. In such cases, it's especially important to make contact with and try to influence the chief.

The chief state school officer administers the basic education programs and the accreditation and school approval process, grants certification for teachers to work in the schools and prepares state rules and regulations that school districts must follow. This individual should be the agenda setter and assume the leadership role for education. For many states, the value placed on education is a direct result of the strength of the state education department and the ability of the department chief to provide leadership. Of course, both the department and the chief work in cooperation with many other organizations such as school boards and associations for superintendents, principals and teachers.

The education department head also may be a member of the National Council of Chief State School Officers (NCCSSO). This organization works on federal issues and provides the education chiefs a network for discussing and getting direction on state education issues.

Since the state education department reviews expenditures and provides statistical analysis, the department and the chief must have a good working relationship with local school districts and the legislature. This becomes a critical activity as education continues to come under the scrutiny of legislators and the general public. For example, in Washington state, the legislature required a study of the funding structure of secondary vocational-technical education, so the legislature naturally turned to the state education department to provide the desired information. However, the department never had been required to collect the data that the legislature requested, so it was unable to help out. As a result, vocational-technical education received a funding reduction. (The department now is working with local school districts to begin collecting this data for future use.)

State Legislators

State legislators have the final responsibility for determining budgets and policy affecting all aspects of state governance. Since the legislators are elected by the public to serve as lawmakers by the public, the citizens play an important role in their political lives. Depending on a state's structure, legislators can be full- or part-time. However, even if they are part-time and therefore conduct government business only during a specified period each year, in reality they work full-time at being legislators because they all have one major goal: to get re-elected. They never stop trying to earn votes.

Every legislator serves on at least two or three committees, and some are appointed to special study committees that may meet year-round. Because of the heavy workload, legislators don't always have time to research all the issues thoroughly, so they frequently identify colleagues who have a similar voting philosophy and look to them for guidance. Consequently, if you can influence one legislator, you might be able to influence more — those who receive guidance from that legislator. For instance, in my first year in the legislature, I served on the natural resources committee because I represented a rural area heavily dependent on the timber industry. However, the committee chair was an environmentalist whose philosophical viewpoints did not always coincide with those of my constituents. So I identified an experienced colleague from a similar rural timber district and followed his lead.

Legislative sessions are hectic and, for the most part, move at a rapid pace. A legislator has very little time for one-to-one contact — except with those individuals who have made themselves indispensable by becoming the lawmaker's eyes and ears on certain issues, including those important to the home district. For example, there was a very strong senator (in fact, she was the majority leader) who during the closing days of each session would post a note on the door to the chamber that she would accept no messages and receive no visitors. At one point, a critical issue was facing vocational-technical education, and a school board member from the senator's district was in town and wanted to contact her. He knew her personally from campaign work, so he told the door keeper, "Just tell (he gave his nickname for her) that I'm here." Reluctantly, the door keeper agreed to give her the message — and within minutes the visitor was ushered into the chamber to meet with the senator. Unlike many constituents, he was able to make a critical point on a critical piece of legislation at a critical time because he had gotten to know the senator.

Legislators have a wide range of influence but cannot be experts in all areas. Although you can make an effort to educate all legislators, it is more practical to find key people, respected on both sides of the aisle, and work directly with them. You should identify about eight lawmakers who are keenly interested in your issues and who serve on both education and budget committees. At least two of these key individuals should hold leadership positions in the majority party, such as majority leader, speaker or chair of education or budget committees.

There's no handy reference that lists the key interests of elected officials. You'll have to get out and talk to them to learn of their top priorities. It's more difficult to get the attention of committee leaders because their plates are often full, but it's not impossible. First-year senators and representatives, however, are sure to have fewer commitments. Make appointments with these key people or their aides and ask them, "What are your important three issues? Does my issue fall into your priority list? Are you willing to sponsor a bill?" Remember that people usually don't get into politics for general reasons. They usually have two or three specific things they want to change or improve.

"Growing" a Legislator

As well as finding a lawmaker in a leadership role, you also should select a new legislator to educate and cultivate. There is no freshman too green to work with. For instance, during the 1995 legislative session in Washington state, the Senate's majority leader resigned, and a 23-year-old freshman senator filled the open seat. He became the youngest state senator in the country.

The new senator had no experience and little knowledge of a certain critical issue. The House in its budget had provided funding for a program involving our skills centers' dropout retrieval program (an integral part of our school-to-work system), the leadership in the Senate had not included such funding in its budget proposal. Two vocational-technical education advocates made an appointment with the young senator to discuss the issue, and after listening to these advocates, the senator decided to make this funding issue his top priority. With a lot of help from other interested parties over the next three days, these colleagues were able to gather enough support in the Senate to include this funding in the budget.

The young senator had his first victory, and vocational-technical education advocates had started a strong relationship with an important legislator. And, of course, students won because they will be able to receive technical training in the dropout retrieval program.

Legislative Staff

Legislative staff are critical to both the lawmaker and to individuals working within the legislative process. Typically, staff members are full-time employees who serve as the contact point for the lawmaker. Staff members handle all incoming correspondence and phone calls, and monitor the pulse of the legislator's constituents. They keep the lawmaker informed of pro and con viewpoints on pivotal issues, and they can be very helpful in getting messages to the lawmaker at critical times.

Staff members often know the progress of bills and the details of individual pieces of legislation and amendments. They are invaluable to the lawmaker and should be treated with the same respect given the elected official. Any act of assistance or kindness to them — such as helpful information on a current issue or a remembrance on a special occasion — will mostly likely be remembered and rewarded with dividends. And I'm not talking about a trip to Las Vegas or even an invitation for dinner. (There's a law against that kind of gratitude now, anyway.) I mean just a simple thank-you. On the anniversary of the passage of the bill that was so important to you, send the aide a card to say, "You really do make a difference." Simple gestures like that — or a phone call, a cup of coffee, a sleeve of golf balls or a plant — go a long way.

Likewise, any disrespectful act toward a staff member also is disrespectful to the legislator. When I was a legislator, one individual lobbyist mistreated my aide, and from that day forward, I never gave another appointment to that individual, ever. It was the only time during my entire legislative career that I closed my door to anyone.

Local Officials

Many educators don't appreciate the connection to public officials other than the obvious (governor and state and federal legislators). However, local officials such as mayors and members of city and county councils, workforce development boards and school boards have tremendous influence on public policy.

These local officials have contacts that either are generally not available to educators or whom educators have not cultivated effectively. They can become your connectors. They are in touch throughout their communities daily and can be mediators between education and community groups.

Public officials are parents of students, too. You need to tell them — and constantly remind them — that the community, to prosper, needs highly skilled employees. And those skills can be taught in schools through vocational-technical education and school-to-careers programs that are well-planned and well- supported — especially by local officials such as them.

Mayors

Mayors can be major players at the local level and usually are very accessible. Although mayors may not be closely connected with education issues, they are heavily concerned with economic development issues. Therefore, when talking to them about vocational-technical education, you can shift gears and discuss adult job training and retraining, as well as training students as the employees of tomorrow.

Mayors have a great deal of influence with local businesses and strong connections to organized labor. Consequently, they tend to be knowledgeable about possible internships and apprenticeships available in the community.

Other local officials who have influence and knowledge similar to mayors are members of city and county councils. You can approach these officials as you would approach the mayor.

Chambers of Commerce

The influence of local chambers of commerce is very significant. Chambers are made up of community business persons, both large and small, and others concerned with local development and growth, including legislators. In fact, many candidates for local and state offices are active in local chambers, so you never know how far a relationship formed with a chamber member might advance.

Chambers often have education committees that develop an education agenda that they promote in the community and among lawmakers, which is why it can be most beneficial to have vocational-technical educators on chamber boards. Chambers provide excellent connections for school-to-careers programs, especially if they are involved in building the programs from the beginning.

Workforce Development Boards

Many states are creating advisory committees, sometimes called workforce development boards (WDBs), to steer vocational education and job training efforts. These may be dominated by business and labor members who may have little contact with or knowledge of K-12 education. It is important, therefore, to identify business and labor individuals with some understanding of the K-12 system and work to get them appointed to the boards. Education must be a partner at the table of workforce boards. This is where work previously done with the governor and the city council will be of use, because they often appoint WDB members.

Influencing the Process

With all this background information on the roles of the various decision makers, how and when can you influence the process for maximum effectiveness?

Discussing Issues

The best time to contact public officials is when they are running for office. Early in a campaign is when you talk issues — if you wait until the last months of the campaign, most of the agenda already will have been established. If they support your issues, you will find it easy to support them. If they don't, begin early to try to influence their thinking and their agenda.

Types of Support

Many people think of political support in terms of financial contributions — and rest assured that money certainly is important. Candidates welcome as little as $10 or $25 because they like to be able to show donations from as many individuals in the community as possible. I still fondly recall the day one supporter asked me to come to her house to discuss day-care issues. She had invited 10 friends for the discussion, and each one wrote me a check for $25. After that experience, she was on the top of my contact list whenever I wanted the "people's opinions" on day-care issues.

Of course, support is not limited to financial contributions, for there are many other approaches:

- Place a campaign sign in your yard or get permission to post a sign in a well-traveled spot. Remember that visibility is key to an election.

- Offer to give your time to participate in a campaign mailing. Candidates usually have several mailings and always need people willing to do the "not-so-much-fun" tasks.

- "Loan" your name to an endorsement placed in a newspaper or in a brochure.

- Write a letter to your friends to tell of your support for the candidate. Your goal should be 100 letters, and all you have to invest is time and postage. Personal contact by mail and phone is one of the most successful campaigning methods.

- Ring doorbells. Face-to-face connection with voters probably is the most powerful campaign tool. When I was seeking re-election as a legislator, I recruited former AVA President Tom Lopp not only for the arduous, shoe-leather, door-to-door campaigning but also to stand on a busy corner in the cold rain and wave a "Randy Dorn" sign in the morning and again in the evening to catch people's attention on their way to and from work.

The bottom line is simple: get involved in campaign work at some level.

After the Election

As soon as the election is over, send a congratulatory note to the winning candidate — even if you didn't support that candidate. You shouldn't mention any issues, but you could include a check to help pay off any remaining campaign debt.

The Initial Post-Election Meeting

Wait about one month after the election to arrange an appointment to talk issues. This timing is important because it allows the official to close out the campaign and relax from the hard work and stress of campaigning.

The proper protocol is to call the official's aide two to three weeks before you want the meeting to take place. Definitely set an agenda for the meeting, and be sure to tell the aide who will be involved. You should have at least two or three people in your group, with a spokesperson for each issue. Your group should include business and labor persons from the community who supported the official (even if you didn't), especially people who have been at the table when the school-to-work coalitions have been developed and the programs implemented.

At the meeting itself, start by identifying who you are, who you represent and your topics for discussion. Supply the official with general information of interest on the main agenda, and then follow up with specific data (such as the issue's impact on the legislator's home district). Don't waste time, but don't be pushy — be specific about what action you want with a "soft sell."

A hard sell is, "I gotta have this, it's gotta be this way, and I won't negotiate." A soft sell is laying out the issue and asking the lawmaker for his opinion. "How do you feel about this? Are there any areas that you think would be extremely difficult to pass or areas that are slam dunks?" Actions like this show the person you are flexible. You can go a step further and give the lawmaker the opposition's side and suggest a person he can call. Then ask, "Can I come back and talk to you after you've spoken to (the opposition)?"

You can storm into a congress member's office ready to play hard ball and say things like, "If you cut this bill, kids will be hurt." Or you can go in and say, "If funding is reduced when block grants come around, how can we make sure that strings are still tied to career preparation programs?" It's not hard to see which is the more effective method.

If you are in the strategic planning stage of your agenda, ask for the official's opinion and assistance in formulating the strategy. Also remember that the school-to-work movement can be connected to more issues than just education — issues such as economic development, welfare reform and juvenile justice. When you discuss school-to-work with public officials, be sure to emphasize how it affects issues that interest them.

Be prepared to leave promptly when your appointment is scheduled to end. It is better to get up to leave and then be asked to remain rather than to overstay your welcome. Most important, leave a written summary of your viewpoints and offer to be of assistance in the future.

After the meeting, send a thank-you note with a brief recap of your agenda items. It is critical that you have constant follow-up with a consistent message. Waiting to make contact until a crucial vote is about the same as making no contact at all.

Building Trust

In the political arena, your word is your bond. If you give misinformation (knowingly or not) to a legislator who then uses it in a committee meeting or public forum and is later proven to be mistaken, you might never be held in confidence again. You need to be vigilant in guarding against presenting an emotional opinion as unadulterated fact because the consequences to your cause can be severe.

For example, when I was in office, a legislator stood up on the floor of the house and claimed that special-education students with behavioral disorders could not be kicked out of school even if they disrupt class. In response, I stood up and said that his statement was inaccurate, noting that state law does allow students to be suspended — and that I, in my roles of elementary and high school principal, had personally suspended students for three to five days and, by changing their individualized education plans, up to 15 days. Because my colleague had been given incorrect information from a teacher visiting his office (so he claimed), he looked uninformed at best or foolish at worst on the House floor.

To really help strengthen your relationship with a policymaker, your contact shouldn't be just political. If possible, you should try to get to know the individual personally because that can really increase your credibility and reliability. If you are planning something fun to do, feel free to ask the policymaker to be a part of it — to come to your home or to go out to dinner, to a sporting event or to some other social function that has nothing to do with politics. Remember, though, that public officials have many obligations and can't accept every offer, and be sure to be friendly but not too forward or pushy.

Providing Information

All legislators are looking for efficiency, quality and results, and they want specific information. You can give them this information through a variety of means such as student success stories, program evaluations, employment rates and other statistical data.

To present your information, you should use a variety of methods:

- A spoken presentation (hint: never read from your script but instead look at the official and hit the high points)
- A few charts or graphs or lists of "bullet points" to emphasize major aspects
- Brief articles, interviews, quotations or testimony from hearings
- A video of a student success story (about 10 minutes)

- A written summary of viewpoints
- A personal letter (no longer than two pages — and be sure to spell the legislator's name correctly!)

If you are asked a question and you don't know the answer, don't guess or fake it. Instead, volunteer to retrieve the information — and be sure to follow up, even if you have to say you tried but couldn't find the answer.

A critical part of the information process is to provide lawmakers with explanations that make sense. In describing school-to-career transition programs, I now say that these programs help students find their interest, their aptitude and what challenges them, and then connects them to the training or education that will get them where they want to go. This hits home for many people, because they want their children to enjoy what they do and have a career that provides family wages and opportunities for future growth.

An important point to remember when arranging testimony before committees

It sometimes makes a difference who makes a point as much as what the point is. For example, a community college president told the house education committee (which I chaired) that 35 percent of the students in job-specific training programs at his college already had four-year degrees. This statistic emphasizing the need for specific skills rather than just "higher" education (symbolized by a baccalaureate degree) carried more weight coming from the college president than from a high school vocational-technical educator.

Testimonials from former students are excellent. Relish the following e-mail message written by a college freshman to his former high school teacher:

> *How often does this happen? A freshman gets a job over a graduate student! My sister sent me a job opening that the university had for people to install Ethernet cards in computers, so I applied for the job. They called me for an interview and asked me about my computer experience, especially with networks. Well you can imagine what I told them!! I basically told them all that we did in your class! They were impressed to say the least! They told me that they had interviewed grad students who had never even looked inside a computer! So they called today and offered me the job! Needless to say, I am pretty excited! Will let you know how it turns out, but just wanted to let you know, and say thanks again for all that you taught us — it's worth more than six years of college! You might be able to use this example to promote the class in the future! So thanks once again!*

You couldn't have a better example of the value of technical education than a high school student with vocational skills training getting a job over a college graduate.

On-site visits to program facilities often produce fantastic results, too, especially if the legislator can interact with participating students. Be aware, though, that these can be difficult to arrange in the legislator's schedule.

Another way to make a strong impression is to appear before a legislative committee. For example, a local school in Washington state was asked to send students to tell their stories to a state job training council. Appearing before these adult professionals was a young lady with a ring in her nose and tattoos on every finger. She told them that she had started her life out backward — she was 17 years old and had two small children. She was on welfare, and so was her mother. She also had been in the juvenile justice system — but fortunately they referred her to the dropout retrieval program for skills training. She entered the program, took an interest assessment and determined that her career strength was in culinary arts. This program had turned her on to learning, and she was about to start her work-based learning experience in a local restaurant. She testified that she had acquired a vision for the future, and she knew that she would successfully get off the welfare roll and start earning a family-living wage for herself and her children. She even said that she had come to understand that in the working world appearance is important, and that she would soon be removing the ring from her nose and, eventually, even the tattoos. Obviously, this type of presentation is very powerful and inspirational, whether delivered in person, in writing or by video.

How Organizations Can Help

Statewide organizations can put together strategies that cross over many issues and have statewide impact. They can build a database with critical information that is easily accessible by members, such as identifying legislators and congressional leaders who represent each school district or institution. Such an organization can perform many functions:

- Organize events at the state capital to involve policymakers and publicize your issues.
- Attend committee meetings and work the system while the legislature is in session.
- Monitor committee work and voting records of legislators.
- Provide regular updates of action taken by lawmakers.
- Provide testimony or arrange for local people to testify.
- Help form alliances with other groups that have similar goals.

If the organization is supported by a political action committee (PAC), members can attend fund raisers to discuss issues with the policymakers.

In contrast, not having an organization or group to support your cause can be detrimental. One time we in the legislature were struggling to find a way to pay for an omnibus drug bill for building jails and developing drug and alcohol prevention programs. Eventually, we decided to pay for it through "sin" taxes (taxes on tobacco and alcoholic beverages). But soon afterward many legislators in leadership roles were at a social event partaking of the typical assortment of beverages — including soda pop. One of the legislators asked, "Who lobbies for the soda pop industry?" No one knew! And without a lobbyist, the industry seemed to have no contact with or representation in the legislature. So on the floor the next day, the legislators placed a tax on the soda pop industry — one cent per 12 ounces. Two days later, the soda pop industry hired one of the top lobbyists in the state. (As a general rule, most lobbyists are hired to kill legislation rather than get legislation passed — it's far easier.)

Some people say, "Making legislation is like making sausage." Well, sometimes it is. Lawmakers have to use whatever is available to them.

For example, toward the end of one session, we were looking for a way to fund our dropout retrieval program in the vocational skills centers. We didn't think we could get more funding for education, but there was "wiggle room" in the juvenile justice budget and possibly in the welfare reform budget, so we tied dropout retrieval funding to these two issues. This resulted not only in funding but also in the willingness of the juvenile justice system to refer kids to this skills training program instead of just releasing them to the streets.

Politicians for a Lifetime

The connections you make with policymakers are long-lasting. Keep in mind that these individuals frequently resurface years (sometimes many years) after they leave office. For example, Washington state's current governor is a former state staff person and former congressman; five of the top eight candidates for governor either are current or former legislators; the mayor of the state's second largest city was a state representative, chair of the House education committee, majority leader and speaker of the House; and the executive director of the board for the four state colleges and universities had been the House education chair and the Senate majority leader.

You should never burn the bridge with any legislator because you might need to work with that legislator later on. You can be assured that someone you are currently working with in the state legislature will turn up someday as governor or con-

Be Wise!

Follow the "be" examples when dealing with public officials:

• ***Be accurate.***	Give statistical data, not warm-and-fuzzy fluff or emotionally charged opinion.
• ***Be informed.***	Know the issues.
• ***Be available.***	Work with their time schedule, not yours.
• ***Be friendly.***	Keep in touch all year.
• ***Be understanding.***	Know their positions — which may not be yours.
• ***Be reasonable.***	Recognize differences of opinion.
• ***Be realistic.***	"Compromise" is the name of the game.
• ***Be fair.***	They are people, not unlike you and me.
• ***Be brief.***	Busy people need short and concise explanations.
• ***Be appreciative.***	Thank them — they get criticism, but little thanks.

gressional representative. Even if a legislator might vote against you on five out of five issues, he or she might turn up five years down the road in another role — and maybe by then will have become much smarter and decided to support your issue.

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A View from the Inside

Politics is a contact sport. If you are going to play the game, you must make contact — with supporters as well as with opponents. In this respect, politics is like a basketball game: you can pay very little and listen to it on the radio in the parking lot; you can purchase a ticket and be a spectator, sitting up in the stands and listening to and watching the action; with a little more investment, you can pay to sit on the bench and participate a little; or with a reasonable amount of money and with other active, involved members in the political process, you can be a starter or maybe even the coach. But just remember, the more you move up the scale, the more intense your contact will be.

We can never know in advance the far-reaching impact of our labors. For instance, my efforts in the Washington state legislature led me to make a presentation at an AVA convention. An individual from that audience then invited me to speak about internship programs at a state tech prep conference. And after that presentation, a business person who had been in the audience said he wanted his company to develop such a program in his state. Within one month he brought a group to Washington state to meet with school districts and industry personnel, and within six months his company had begun its own internship program. In essence, with many people's assistance and initiative, my work in one state eventually came to benefit students in another state.

One final thought: Some issues are decided by one vote — that's why each public official and policymaker is important.

Chapter 12

Providing Business/Industry Experiences for Educators

By Patty Williamson, Ph.D.

Ben Helmandollar heads the Roanoke (Virginia) Area Tech Prep Consortium, one of the oldest and best in the country. He tells a story that epitomizes why it's so important to get teachers, counselors and administrators out into the business world.

"When we first started Educators in the Workplace, there was a high school principal who got really excited about it and insisted that many of her teachers participate. I asked her why she was so much more enthused than some of the other administrators, and she told me that 20 years earlier, when she was a guidance counselor involved in the career education movement, she spent two weeks in the summer working for the phone company, doing every job from operator to lineman. She said that experience changed the way she worked as a guidance counselor. Later, when she became an assistant principal and a principal, the way she thought about instruction was very different than it would have been without that time in the workplace.

"Just think how many students she had influenced in 20 years! When you send a teenager out into the workplace, you can change one life, but when you send a teacher, you can change thousands."

Types of Experiences

Opportunities for teachers, counselors and school administrators to experience the business workplace vary widely, based on local needs and interests, but most tend to fall into four progressively in-depth categories:

- Interviews of prospective school/business partners
- Short-term visits that provide a general overview of a company
- Job-shadowing assignments with employees
- Hands-on internships, ranging from a few weeks to an entire summer

Interviews

Many school districts begin their involvement with the business community by sending teachers or counselors to scout out employers willing to participate. In the early years of the Roanoke program, for instance, Helmandollar recruited 51 teachers to survey 670 chamber of commerce members. It helped that the CEO of the biggest corporation in the area sent a letter to all chamber members telling them to expect calls from educators involved with tech prep and letting them know he endorsed the project. (This is a common approach. In Columbia, Missouri, for example, a regional economic development group made initial business contacts for educators.)

Roanoke teachers phoned each company to set up in-person interviews. For the conversation, they used reference sheets that prompted them to: find out the name of the owner/president, human resources manager or other appropriate person to talk with; mention the introductory letter the company had received; explain that they wanted to meet to conduct a 30-minute survey that would give insight into the employers' needs and enable schools to provide a better-prepared workforce (especially at the technician level); and set a mutually convenient time for the meeting.

In the personal interviews, teachers explained that they represented the tech prep consortium, which includes all the schools in the Roanoke area, gave a brief description of tech prep and its goals and asked such questions as: What do you look for in new employees? What do our students need to know to be successful on the job? In what ways would you be willing to help schools in a partner relationship? How can the schools help you? At the end of the interview, teachers left a self-addressed postcard asking the business people to indicate if they enjoyed the experience, what they thought of the interview and tech prep and how they'd like to be involved.

"The response was overwhelmingly positive," Helmandollar says.

Others who have used a similar technique say that the rapport and mutual respect that interviews establish between business and education are so valuable that the time and money involved would have been well spent even if all the information collected in the interviews had been thrown away. In many communities, business people may have little personal contact with educators. Someone has to make that first invitation for a relationship to blossom.

In addition, these initial contacts with business also provide educators with a wonderful source of guest speakers and industry representatives to assist with curriculum revision.

Short-Term Visits

Getting educators in to observe industry in action, whether for a few hours or one or two days, often is the first step to a real understanding of the world of work. Even though these structured visits are brief, careful planning can keep them focused and productive. It's best to prepare educators before the visit so they can think about classroom applications for what they will see and hear. You can give educators a list of questions to ask their hosts. Better yet, have them compile their own list so they are involved and thinking about the process beforehand. **Exhibit 12-1** shows the questionnaire used by the Workplace Applications Project of the South King County Tech Prep Consortium in suburban Seattle.

On the visit, educators should receive:

- a presentation by the CEO or other top-level official to reinforce the company's commitment to education.

EXHIBIT 12-1

WORKPLACE APPLICATIONS PROJECT
Company Cover Sheet

Company ______________________ Contact ______________________
Address ______________________ Phone ______________________
______________________ Date of Visit ______________________

Management/Human Resources Questions

Primary products/services: ______________________
What kind of person are you looking for? (Personal attributes, technical skills) ______________________
____
How do you announce employment openings/recruitment notices? ______________________
____
What kind of pre-screening do you do? (Education/experience/other) ______________________
____
What type of interviewing do you do? (one-on-one/team interviews/other) ______________________
____
Why do you let somebody go? (reasons for termination) ______________________
____
What are the occupation titles within your workforce? ______________________
____
What are the skills employees will need in five years? (workforce of the future) ______________________
____
What type of retraining do you do? (employee basic skills retraining program) ______________________
____
What percentage of your workforce has a four-year college degree? ______ 2-year? ______
High school diploma only? ____ No high school diploma? ____
What kind of accommodations do you make for people with disabilities? ______________________
____
What is the role of employee organizations/unions within your company? ______________________
____
Does your company conduct drug testing? ______________ (Random or mandatory?)
Does your company offer a tuition reimbursement program? ____ Yes ____ No

Work-Based Learning Questions

Are you willing to:
___ Host tours for students ___ Provide speakers ___ Provide job shadowing opportunities
___ Provide student internships ___ Provide educator internships ___ Visit our schools
___ Invite teachers into your training classes ___ Provide employees who will mentor teachers
___ Hire college co-op students ___ Provide employees who will mentor students

(continued on next page)

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EXHIBIT 12-1

How would you like to be contacted about work-based learning options?

Additional Questions for First Line Supervisors

What would you recommend we do to teach the work ethic?

What is the one thing you wish we would teach our students?

What is the most valuable skill an employee can bring to your department and why is that skill so valuable?

What processes have become obsolete in the last couple of years? What do we no longer need to teach?

Employee Questions

Job title/how long on job

What do you like most about your job?

What do you like least about your job?

How did you choose this particular line of work?

What classes that you took have been the most helpful? (High school, college, training program)

What would be a problem that you might face in your daily work? How would you solve it?

Knowing what you know now, what do you wishe you would have paid attention to while you were still in school?

Please give five examples each of communication skills, math skills, science skills and technical skills that you use on the job

Adapted from the South King County Tech Prep Consortium's "Workplace Applications Project, Summer 1995"

- a tour that gives a general overview of the business,
- an interview with human resources personnel who should describe the skills workers need and other criteria for getting hired and — more important — staying hired, and
- the opportunity to observe and talk with employees at various levels, if time and circumstances permit, to learn what they do and find out the education and training needed for their jobs.

Job Shadowing

"Shadowing" means just what it suggests—within limits of personal space, of course. An educator follows a worker on site, generally for one or more days. This should be preceded by a structured visit that gives the educator a basic understanding of what the company does and the role that the worker plays in it.

Shadowing is an invaluable opportunity to gain insights into skills the worker uses and how those skills relate to what students are (or should be) learning in the classroom. As the educator and worker become better acquainted, they can have relaxed conversations in which the teacher might ask:

- What sort of training did you have?
- What subjects have proved most useful?
- What do you like best and least about your job?
- What advice would you give to a young person interested in this field?

Internships

Internships that place an educator in a working (and paid) position within a company are the most desirable industry experience. Occasionally, internship arrangements allow educators to choose their own hours and how much time they will spend in various departments. Sometimes educators are assigned a short-term task that the company's own personnel can't immediately handle (although it may not be a vital task, since the educator isn't a full-time employee). Most often, the company and the educator agree on an assignment that relates to the educator's discipline and that also benefits the company.

Educator internships sometimes are the most difficult experience to arrange. One reason is the cost. Teacher interns usually are paid a salary or stipend. Research indicates that interns who spend several weeks or an entire summer on the job usually are paid by the employer, frequently at the "going rate" for the position. In other cases, especially short-term internships, the school district pays; $100 per day is a typical amount. Few educator interns are unpaid unless they use professional leave days, which means the district must provide substitutes for them in the classroom. Some districts are looking at options such as granting career ladder credit for internships in lieu of stipends or arranging with a local college to grant credit for the internship or shadowing experiences.

In the case of both job shadowing and internships, business owners also may be concerned about the amount of time their employees will have to spend with interns, the logistics of the arrangement, safety issues and paperwork. Ben Helmandollar reports that safety concerns usually top the list. Before beginning the project in Roanoke, he assured its legality by discussing it with the county attorney. Next he talked to the district's insurer to make certain teachers would be covered in the workplace as they are in the classroom.

The Seattle-area consortium Chris Stone-Ewing heads has helped businesses with teacher internships by developing a standard training model that is applicable either to all aspects of an industry or to a specific department.

Educators can make a case that teacher interns, who obviously are more skilled and experienced than teenage interns, are able to make a positive contribution to the business itself. But the key selling point is that teachers who come into the business world will gain a better understanding of what workers are required to know—knowledge that will be passed on to students, who will be better prepared when they enter the workforce.

The process of placing teacher interns is much easier, educators report, if the request is preceded by such other activities as interviews, tours and job shadowing. Many business people report that hosting interns has been a positive experience for their employees, who feel "important" because educators are interested in what they do and are eager to learn from them. The production manager for a Seattle company that manufactures overhead storage bins for airplanes says that morale, attendance and employees' safety records all improved after having teacher interns on the job.

Helmandollar and others report that as companies experience real benefits from educators' participation in job shadowing and internships and word of the program spreads, new contacts are even easier to make. New businesses may opt to join up and those who have had one or two interns may ask for greater numbers. A caveat: One educator notes that giving teachers a taste of the business world can have a downside. When they realize how much more they could earn in the private sector, some desert the classroom.

Contacting the Right People

Program advisory committee representatives from business/industry and labor are the obvious starting place for discussions about workplace opportunities for teachers. The next step—or the first step, if you lack an advisory committee—is to make contacts through agencies such as the local chamber of commerce, the regional economic or workforce development group, manufacturers' consortiums and business and trade associations. Other sources of potential business partners include *Sorkin's Directory of Business & Government* and high school follow-up studies that show where substantial numbers of district graduates are employed.

"Go to organizations that are already there, tell them what you want to do and let them help you," says Susie Cox, the school-to-work coordinator in Columbia, Missouri. "Working through an intermediary agency is good for a new program because it lends credibility. We used contacts we already had through the Adopt-a-School and Partners in Education programs, too."

When approaching business and trade associations, contact their top executives, human resources personnel and public information directors. A large association might even have an education committee, which is a good first stop. Civic organizations can be fertile ground, too — every Rotary Club, for example, has a vocational education committee. Try not to get discouraged by the amount of time it takes to make all these calls, and expect a few rejections. Remember the words of Karen Miller, a gender equity coordinator in Indiana: "As big as the world is, contacts are still made one by one."

No matter who your initial contact with a company is, you eventually must talk with the CEO — the ultimate decision maker. For a new venture to succeed, whether at a business or at a school, it needs the support and approval of the person at the top. And don't be reluctant to talk with decision makers — you'll probably be surprised at the amount of time top-level executives are willing and eager to devote to education partnerships. When you start to arrange the details of your activity for educators, you may work directly with the owner or manager of a small company, whereas you might work with the human resources administrator or plant supervisor in a larger business.

Succeeding in a Small Community

Living in a small community that lacks a large, major employer doesn't preclude you from finding good workplace experiences for educators. No matter their location or size, all companies essentially look for employees with many of the same skills and the same work-related ethics. Besides, local businesses will provide careers for many students, so they will see the value in preparing educators to teach good basic skills and workplace habits.

Sometimes (perhaps especially in small communities) you may have to take advantage of relationships you already have — as one educator suggests with a smile, you can "hit on your neighbors." But program administrators are almost unanimous in their defense of small towns as providers of a wealth of opportunities. You just may have to be a bit more creative in finding them.

Ron Munkres, for example, says his teachers who spent time in small businesses found that the employees typically worked long hours but were very willing to share their experiences and their interest in education. Interns reported that they got as much benefit from these placements as from the ones with large corporations in nearby Seattle. Working with what's available in the local community often leads to partnerships for future activities, as well. Munkres suggests that public utilities are likely partners, as are small branches of regional or national companies.

Although Susie Cox has many resources to work with in the university town of Columbia, Missouri, she deliberately chooses some very small businesses as shadowing sites because teachers can so easily observe all aspects of the operation. "They're excellent examples of integrated activities," Cox says, "and have real value for educator visits."

Steve Coffman, coordinator of the A+ Schools program in the 200-student Linn (Missouri) High School, suggests expanding the area of focus to include nearby large towns or, perhaps, using an entire county for workplace involvement. His district has a unique long-distance relationship with a manufacturing company many miles away. Because the parents of many students are employed there, strong business-education ties have developed. Initial on-site visits "to link faces with names" are followed by communication on the Internet, and they expect soon to establish audio/video contact.

"We're no longer just a small community," Coffman says. "For example, we made one site visit to McDonnell Douglas, a major aircraft manufacturer in St.

Louis, halfway across the state, but 80 percent of our follow-up contact has been electronic. The Internet is changing everything for rural areas."

Training for Contact

Generally, a tech prep consortium or program director initiates business/industry contacts and then follows through and completes arrangements for educator involvement. But the South King County Tech Prep Consortium, which includes 10 school districts, three two-year colleges and a university in the Seattle area, uses a different approach. Chris Stone-Ewing, the consortium coordinator (who came to the program from Boeing), leads a training session to prepare teachers to make their own business contacts.

After the training session, teachers select businesses to contact, make the initial calls, navigate through the business hierarchy and arrange for their own involvement. Stone-Ewing notes that this is a confidence-building experience that helps to create a fine first impression and can prove useful in many other situations.

A sample opener for such a call might be, "Hello, I'm Barbara Brown. I and other teachers at Acme High School hope to spend the summer finding out how the workplace and the school are connected. We've chosen your company as a site where we'd like to get some information. Could I talk to you in person about this?"

Finding the right person to talk with can be one of the most difficult aspects of setting up an internship. One approach is to start with a specific department such as human relations or community relations—professionals who are used to dealing with people outside the company and who have an outward-looking view. Another possibility is to start with someone you know in the company—a neighbor, relative or friend—who can steer you to the best person to talk with initially. (This approach is a good way to introduce teachers to the value of networking.)

The session also helps educators understand that the business world's approach, attitude and timelines differ from those of education. Frequently, educators are accustomed to an investigative, discussion-oriented style of conversation, whereas business people typically operate on a compressed schedule and will expect short, precise, quick answers to such questions as "What do you want us to do?" and "What do you expect to get out of it?" Consequently, teachers must practice verbalizing responses to anticipated questions, just as students are coached to do for job interviews.

How Many Educators to Include

Everyone who helps prepare students for the world of work needs to experience today's workplace firsthand. The reason is simple: You need to know that what you're teaching is current and relevant. After all, it's hard enough to "sell" your subject to teenagers when you're absolutely certain of its value, but the task is nearly impossible if students sense that you have some doubts about your subject's applications or if your last contact with the "real world" was decades ago. "When teachers haven't had experience," says Karen Miller, "their body language and all the non-verbal cues can indicate to students, 'I'm not really sure how you're going to use this.'" Conversely, as Susie Cox notes, "It's very powerful to be able to tell your class, 'I was there and this is what I learned.'"

Most educator-in-the-workplace programs start small, perfect the process and expand. The best teacher recruitment method is positive word-of-mouth promotion, which can result in more recruits than you can handle. Julie Nichols, who heads the Career Education Associates of North Central Illinois (CEANCI) consortium in Rockford, Illinois, joins with Rock Valley Community College to run the Learn 'n Earn summer program. During one week each summer, this program hosts 25 to 35 teachers, counselors and administrators. The participants are divided into five teams, and each team visits a different site each day (a total of 25 industry visits). They receive structured tours and hold dialogues focusing on integrating curriculum and other ways to link the workplace and the classroom. The program has become so popular that many applicants are turned away, and participants aren't allowed to repeat the experience.

Here are examples of some other programs:

- Chris Stone-Ewing's program in King County, Washington, has grown from 16 teacher interns and job shadowers the first year to 120 the third year.

- Tamra Busch-Johnsen's Business-Education Compact in the Portland, Oregon, area arranges internships for 80 to 100 educators every summer. Hundreds of others participate in related workshops and short-term visits.

- During the last 12 summers, the Industry Initiatives for Science and Math Education (IISME) in the San Francisco Bay area has provided workplace experiences for one-fourth of all the math and science teachers in its seven-county area. Kaye Storm, director of special projects for the program, reports that the ideas these teachers have generated have reached more than 250,000 students. Many teachers have been "repeaters," going to different companies in subsequent years.

- Ron Munkres, director of applied technology education at Sumner (Washington) High School, speaks of the importance of achieving "critical mass" — in his view, 10 percent of a particular group involved in a project. This level of involvement, he believes, can affect the overall group environment. In 1996, nine of the 78 teachers at Sumner (just over 10 percent) participated in the South King County "workplace applications project," which teaches how to involve industry in curriculum development. "Two or three teachers couldn't have had the same impact on our curriculum," he says. Over the past five years, about 85 percent of the school's vocational teachers have served extended internships with industry. Munkres hopes eventually to get at least three-fourths of the academic faculty similarly involved in industry activities by targeting a "critical mass" each year.

Using the Team Approach

It is more valuable to send teams of people, rather than just one person, on every workplace visit. Creating teams across academic disciplines promotes viewing the experience from varied perspectives and encourages the development of integrated curriculum activities.

Susie Cox sends out groups of four to six educators. After their visits, they can discuss what they've seen and begin to build a support group in their school environment. "Excitement is contagious," she says. "If teachers go out alone, they have no one to talk to when they come back."

Julie Nichols also endorses the team approach. She usually assembles teams from within one school district, but she also sees benefits in grouping teachers from different districts if they teach the same subject. "It's good for math teachers to be able to talk to other math teachers," she says.

Most districts would like to see all their staff members benefiting from workplace experiences. Walhalla High School in South Carolina is doing just that. In 1996, the career specialist who heads the school-to-careers program arranged visits with 10 businesses, and each of the school's 65 teachers and counselors was required to visit at least five of them. Some made their visits during the extra-long staff development periods afforded by block scheduling, whereas others chose to go on their own time. Principal John Hostetler says these visitations probably will be an annual activity for new faculty members, with experienced teachers repeating the experience every three years or so.

How Many Businesses to Include

You should recruit as many business partners as possible within parameters that will be beneficial to your program.

Teams of educators in the South King County Tech Prep Consortium are organized around career pathways and plan their workplace experiences accordingly. Those in the health occupations pathway might visit a pharmaceutical company, a diagnostic or physical therapy clinic, a dental lab, a hospital's central supply department or a home nursing operation. This enables them to experience varied opportunities in health care.

Chris Stone-Ewing, who coordinates the consortium, says another selection technique that works well is to pick businesses that deal in items familiar and interesting to students. For instance, elementary teachers who visited the Hasbro toy warehouse were able to hold students' attention when they talked about the workers' use of math skills because the youngsters were immediately in tune with the nature of the business.

Educators report that their requests are seldom turned down. In fact, many companies have long wished to help schools become more effective in producing a better-prepared workforce. When they are finally contacted, they welcome educators, according to Ron Munkres, "with back flips, delighted that we are interested in their world and their problems."

Jim Murphy, who heads The Boeing Company's student/educator internship program in cooperation with five tech prep consortiums in the Puget Sound area, reinforces this perspective. For several years, Boeing was the primary site for teacher interns from the consortiums. Then Murphy, realizing that Boeing could not accommodate all of Seattle's high school teachers, became a key cheerleader for expanded industry involvement. In 1995, he recruited seven other companies to take interns, and in 1996 he recruited another 21 companies. Now, nearly 30 manufacturing companies in the Seattle area offer paid internships for teachers.

Murphy explains why it is so important to get teachers into the workplace: "Even if they had some exposure to industry when they were in college, everything has changed. We surveyed a number of manufacturing companies, including our own, to find out what they considered the key to workers' success 15 years ago and today. They told us that 15 years ago it was the ability to run a lathe or some other machinery. Today, it's team-building and problem-solving skills. Every respondent gave the same answer."

The more companies you have engaged in partnerships, the more variety you can offer teachers. They can acquire a broader knowledge of the workplace and can realize that different employers share views about expected skills and work ethics.

How Much Time to Spend

The amount of time educators spend in a work-based experience depends, of course, upon the nature of the activity and what educators hope to gain from it. Karen Miller believes partners should first determine a focus for the activity, whether it's to create an awareness of the need for change, to learn applications, to develop partnerships or to improve a vocational teacher's occupation-specific skills.

Of course, different people and projects have different beliefs and approaches, as shown in the following examples.

- For teachers in Ben Helmandollar's tech prep consortium, as in many others, workplace visits are a staff development option. In Roanoke, teachers visit companies on two consecutive days in the spring while substitute teachers cover their classes. Participants may opt to spend both days in a large company or visit up to four smaller ones.

- Ron Munkres believes that concentrated experiences are most effective. "There's more focus with a short-term project," he says. "If we spread it out over a longer period, participants have a million other things on their minds. It's harder to maintain continuity and make correlations if they think about their workplace activity only now and then."

- The workplace applications project in the Seattle area operates on the principle that at least four visitation days are necessary for a major impact, and they are spread over a month in the summer. This schedule was adopted after veteran teachers told project administrators that there isn't enough time to reflect upon and absorb what they've seen if the visits run consecutively.

- Cynthia Hicks, former tech prep coordinator for five counties in northwestern Indiana, reports that teacher interns in her program spent two weeks in business/industry visits, picking their own hours and visiting one or more departments.

- Ann Gaulin, tech prep coordinator at Three Rivers Community-Technical College in Norwich, Connecticut, believes four weeks is the minimum time necessary for educators to become involved in a project for its partner, Pratt & Whitney, and see it through to completion.

- Kaye Storm believes educators must remain at least six to eight weeks in order for them to be useful to the companies. "If the interns stayed for a shorter period, all the time would be spent in training them," she says.

- Karen Miller's job-shadowing program provides educators with 15 days of experience spread over nine months, using workshop and in-service days when school is not in session so that substitute teachers are not required. Educators have to spend at least three consecutive days at the job site, and they have to work the exact schedule of the employees, whether it's shift work, short-turnarounds or extended hours. This helps them get a good feel and understanding of the workplace environment — the stress as well as the boredom — so they can be better prepared to answer students' questions about a career field. Says Miller, "Our people need to be able to say, 'If I'd chosen this occupation, this is how I'd be living.'"

Most programs offer experiences of varied duration. For example, the Business-Education Compact in the Portland area arranges two-day business visits as well as summer internships of three to nine weeks.

The question is not "what format is best?" but rather "what format is best *for the situation at hand?*" "Day-long visits are a good introductory experience," observes Susie Cox, "but with internships you get more reality-based contextual experiences incorporated in the classroom." Kaye Storm believes the two approaches are complementary. "They meet different needs," she says. "You can't say one is right and the other wrong. Often teachers get so jazzed up on field trips that they apply for immersion experiences."

Ron Munkres makes an important observation. "As with students, it's not the 'seat time' that's important. It's what teachers are doing with it — whether they're learning something and being challenged to change curriculum."

How Many Sites to Visit

If teachers can spend only a day or two in industry visits, the amount of information they can obtain about any site, whether they visit one or more companies, will be rather superficial. However, when teachers have several weeks, they can choose between experiencing one business in-depth — really learning what goes on there — or taking a quicker look at several to gain breadth over depth.

Sally Mayse, coordinator of the Lowcountry Tech Prep Consortium in Varnville, South Carolina, believes educators should visit as many sites as possible to "get in touch with reality" and see how many different career opportunities their community offers.

Chris Stone-Ewing notes that broad exposure can help reinforce ideas when educators hear the same message from employers at several different places. "For example," she says, "nearly every employer we visited, regardless of the career pathway, told us the communication skills we were teaching too often excluded technical writing, technical reading and teamwork. They said every employee needs these, no matter what field they're in, no matter whether the business is large or small. It creates a much greater impact when teachers hear this over and over."

Ron Munkres believes a multi-business approach is best when teachers are integrating curriculum. However, he says in-depth immersion in one company probably is more useful to vocational teachers who focus on skill development. For example, an aeronautics instructor might benefit more from spending time in several departments of a large company like Boeing, or an automotive instructor might return several summers to a dealership to keep up with new technology.

Kaye Storm also sees advantages in both the broad and in-depth approaches. "But," she says, talking about the in-depth approach, "you can't beat the 'ah-ha's' a teacher gets from being immersed in one business culture all summer!"

Follow-Up Activities

The goal of every workplace visit should be to create a positive change in the classroom — making curriculum more integrated, creating stronger ties between education and the world of work and helping students be aware of and better prepared for a wider range of career opportunities.

Perhaps the most universal follow-up activity in these programs is a debriefing session, which Susie Cox characterizes as "collaborative reflection time." Almost every project (especially those involving a stipend) requires participants to submit a written report, often including a list of ideas for curriculum activities based on their industry observations. These reports are frequently made available to other teachers to increase the impact of workplace experiences.

Participants in Karen Miller's summer program spend six full days in follow-up workshops sharing experiences with the entire group and developing a presentation (including a video and brochures) to be shown to students in all their classes.

Kaye Storm emphasizes that internships can't be a success if they are "just a summer job." Her organization offers a range of services, workshops, training sessions and networking opportunities throughout the school year. "Teachers are often very isolated," Storm says. "Even if they have a great experience in the summer, if there is no follow-up, chances are the impact the teacher can create will not be very substantial."

Ron Munkres echoes Storm's belief. "So often we take people to the mountain, show them a great experience, then bring them back down and leave them alone," he says. "They come back really excited, but then if they don't get any reinforcement, over a period of time their enthusiasm goes from the front burner to the back burner. The fertile time is when they just get back and have lots of new ideas. We try to provide mini-projects that encourage them to involve colleagues who did not participate in the intern project. The interns and others, who integrate one or two of their ideas in the classroom receive another $100 or more. Of the nine teachers who did internships last year, six chose to do this, and they are the ones who have had the most impact on our school."

An English teacher and a marketing teacher in Munkres' district worked together on a successful mini-project through which English students served as theme readers for research papers written by marketing students. The readers looked for quality control factors, including complete sentences, word choice, point of view, verb tense, paragraphing and organization and such format-related items as margins and headings.

Another teacher developed a process for students to gather information related to social studies events and activities from the business community as well as the library. Students used the same technique and questionnaire the teacher had employed as an intern to obtain information about the workplace.

Portland's Business-Education Compact, a private entity that sells liaison services to businesses and schools, provides a curriculum specialist to help teachers transfer workplace experiences to the classroom. In addition to a follow-up workshop, the group publishes a newsletter about the internships and the results from them. "We do a very thorough follow-up with pre- and post-surveys to see how teaching has changed," says Tamra Busch-Johnsen. Also, Apple Computer Inc. loans computers to many of the participants, not only for the duration of the internship but for the entire school year. These computers enable participants who otherwise would not have computer availability to have modem access to other teachers and to the Internet while working on lesson plans to enrich their curriculum.

As part of its follow-up activities, the CEANCI consortium in Rockford, Illinois, requires teachers to prepare a plan for one activity, either within their own subject area or across disciplines. Margaret Arnold, the Youth Apprenticeship Coordinator in Douglas County, Georgia, requires two lesson plans or one integrated project involving two or more disciplines.

Boeing has developed a particularly exciting follow-up activity with five tech prep consortiums in the Puget Sound area and one in eastern Washington. Boeing surveyed 177 manufacturing companies to define a set of 300 performance objectives grouped around 10 core competencies. Seven of the 10 are workplace generic—things like group dynamics and communication, safety, print interpretation and precision measurement—while the others, such as shop skills and blueprint reading, are specifically related to manufacturing.

A grant of $325,000 from the National Science Foundation paid for secondary and postsecondary teachers to develop 50-minute lesson plans based on the competencies. Summer interns at Boeing also write lesson plans, and 400 of them have been compiled and made available to all the high schools included in the six consortiums. This enables hundreds of teachers to incorporate current practices in industry into their everyday curriculum. Boeing also asked the state board of education to inquire whether other high schools across the state would be interested in piloting these lesson plans, and 25 chose to do so for fall 1996.

Benefits of Diverse Work-Site Experiences

Visiting work sites where they don't expect to see their subject matter applied can open teachers' eyes to all sorts of different career opportunities for their students. As Karen Miller says, "Sending an English teacher to an architecture firm and a drafting teacher to a public relations firm — not knowing the job, not knowing what to ask, coming into the field blind — can give them wonderful insight into how to stimulate a student who doesn't know what career to choose and who is looking to teachers and counselors for help. Educators need to send young people in all directions, not just the ones they themselves are familiar and comfortable with."

"We all need to be exposed to diversity," says Susie Cox. "Teachers who are exposed to many different work-site experiences come away with new respect for all work. We can't know today what all the jobs of the future will be, but if we want our students to explore and become aware of many choices, teachers also have to be open to new experiences."

Counselors, too, change their approach after experiencing the business world. "All of a sudden they recognize the real value of career guidance. It becomes a much more intentional part of their job," says Sally Mayse.

Winning Converts

Some teachers initially are reluctant to visit job sites they consider unrelated to their teaching field, but then they often find unexpected connections. For example, a foreign language teacher was surprised that so many different employers mentioned the need for bilingual employees. "It was such a 'high' for her to hear a hospital administrator say they need people in admissions and the ER who can communicate with non-English speaking patients, often when time is crucial," notes Julie Nichols. "And she didn't realize how many manufacturing companies have customers in other countries. It gave her a whole new outlook on her discipline, which she'd previously considered primarily college-prep."

Teachers of certain subjects (such as language arts) might not be aware how their subjects are relevant to the workplace. For example, one English teacher didn't even believe that it was the school's job to prepare students to go to work, but when she made some visits to the workplace, she discovered how much employers emphasized communication skills. Another English teacher learned the value of good writing skills in the technological environment when she visited a manufacturing plant. Because the workers of one shift weren't leaving clear written summaries of what they had completed and what still needed to be done, the workers on the next shift were wasting time trying to determine what they were supposed to do. Similarly, another English teacher who normally taught a traditional college-prep curriculum learned the importance of applied communications in the business environment when she spent several weeks revising technical manuals for a local company.

Even teachers who are convinced that their subjects are directly applicable to the workplace don't always realize the extent to which they are used. Without recent workplace experience, they often are not aware how much the level of technology in industry has changed, especially "down on the factory floor." A math teacher who spent time in a manufacturing plant wrote in his evaluation, "Of all the professional development experiences I've had in the past 20 years, this is by far the best. I've always taught tri-axis algebra to my advanced algebra and trig students. But on the shop floor I saw machinists and equipment operators (employees with only a high school education) using tri-axis algebra and coordinates, and I realized I need to start introducing these concepts in my beginning algebra classes, too."

Workplace experiences often reveal to teachers the interconnection of many skills. Tamra Busch-Johnsen observes, "Work readiness, work ethics, accuracy, communication skills, critical thinking, problem solving, accountability, the culture of the workplace, working in teams, the need for high production, research skills — these cross curriculum lines and, no matter what the application, it's good for teachers to see them in action." Sally Mayse notes that seeing related activities in different fields helps to build "a sense of collegiality among teachers and helps to start the integration process."

And Chris Stone-Ewing notes a most fulfilling benefit that every teacher can look forward to applying: "When the kid in the back of the room makes you crazy by saying, 'When am I ever gonna use this stuff?' you can tell him just how you saw it used in every one of the places you visited!"

Patty Williamson is a freelance writer based in St. Louis, Missouri.

Incorporating Workplace Experiences in the Classroom

Much of what educators learn from experiences in the workplace is shared with students through integrating disciplines, team-teaching activities and new curriculum materials and delivery techniques. But experiences can be shared in simple and unexpected ways, too. For instance, a French teacher who visited a bank passed along information to students by having them learn to complete banking transactions — in French.

Here are some other examples of transferring workplace experiences to the classroom.

- In Seattle's workplace applications project, each four-teacher team is required to collect 25 examples of on-the-job skills used by employees in the industries they visit (five examples each for communications, math, science, SCANS competencies and the team's technical specialty). Over the life of the project, these examples have been incorporated in literally thousands of classroom activities and published in a Workplace Applications Manual.

- Chris Stone-Ewing reports that one social studies teacher prints the SCANS competencies as a footer on every assignment she hands out. The impact of this practice has been impressive. Now every student is aware of what SCANS competencies are. Also, when Stone-Ewing and representatives from the U.S. Department of Labor and the Northwest Regional Education Lab held focus groups with three of this teacher's classes, the students said these skills should be mastered in junior high or middle school. In their view, students who get to high school without them "are sunk."

- The English teacher mentioned previously who didn't even believe that it was the school's job to prepare students to go to work is now doing just that. Says Ron Munkres, "This former opponent of integrated education is working with our marketing teacher to develop a computerized system that will scan students' written assignments in vocational classes and look for errors in grammar and syntax. She has tremendous ability and knowledge, and it's being put to use as a resource for our vocational programs."

It also is important to bring to the classroom the culture of the business environment. As Kaye Storm says, "There are many subtle attitudes to be shared with students — expectations employers have of employees and the kinds of process skills they're looking for, such as the ability to work in teams, to communicate clearly, to be flexible and to work on multiple projects simultaneously."

The Importance of Experience

Karen Miller summarizes well perhaps the two most crucial benefits from workplace experiences for educators — the first one affects teachers, and both affect students.

"Internships make educators more dynamic," says Miller. "There is nothing better to rejuvenate them and give them confidence. They change the way they teach after they've been out in industry, because they have personal experience and they know what they're teaching is right." This enthusiasm improves the quality of life for the teacher as well as the quality of education for students.

The other crucial benefit is most advantageous to students because it addresses the fears they may have about facing the potentially unpromising employment prospects predicted by some analysts. "When teachers get out into the workplace, they can see all the opportunities," Miller says. "Then they can say to their students, 'There is something you can do with this knowledge. I know the direction industry is going, and there will be a place for you.'"

Karen Miller has secured some exciting experiences for educators. She's arranged assignments at Churchill Downs racetrack in Louisville, Kentucky (home of the Kentucky Derby), the Indianapolis 500 automobile race and the 1996 Centennial Olympic Games in Atlanta. She also has obtained weeklong assignments with the Secret Service that enabled interns to meet President Clinton and Vice President Gore.

Miller includes opportunities like these because, she says, "I want people to be able to dream, to be excited about possibilities. Kids don't think about careers because they want to work, but because they have dreams of being somebody and doing exciting things.

"And it's amazing what one or two 'dream' assignments can do for an entire group of educators," Miller continues. "They're proud to know someone who had such a wonderful experience. It gets the adrenaline going about possibilities, and everyone carries it back to the classroom."

Here is Miller's advice for locating "dream" assignments:

1. ***Think creatively.*** Where would you most like to go? What occupations hold great interest for you? Whom would your students most like to know?
2. ***Listen actively.*** You can discover possibilities during professional meetings, at social events or from television and radio programs.
3. ***Pursue professionally.*** List the avenues available to you, including friends and professional acquaintances. Also call and send letters of inquiry to organizations.
4. ***Prepare meticulously.*** Know clearly what you are asking for — the number of people involved, the time frame required and the outcomes and benefits to schools, students, educators and also the company involved.
5. ***Follow up quickly.*** Thank the organization for the work-site experience, and send along any publicity or promotional materials that mention the organization's involvement.

Chapter 13

Model Partnership with a Large Corporation

Siemens Stromberg-Carlson

By John Tobin and Suzanne Tesinsky

Siemens Stromberg-Carlson, headquartered in Boca Raton, Florida, and an operating company of Siemens Corporation in New York City, is a technological and marketing leader in the telecommunications industry. It is the third largest public network supplier in the United States, with approximately 3,100 employees involved in designing, manufacturing and marketing digital central office switching systems, cell switching systems, packet switching systems and fiber-optic transmission products.

In 1991, the Lake Mary, Florida, plant of Siemens Stromberg-Carlson faced a dilemma: we needed technical workers but there were not enough skilled people to fill the jobs. For example, Siemens traditionally hired graduates from a vocational technical school or from a community college to fill installation technician positions in demand because of increased business and high turnover. But it took up to one year until new employees were able to perform the job well. Initially these employees lacked both theoretical knowledge of telecommunication and practical proficiency in cabling, fastening, troubleshooting, schematics reading and nomenclatures.

For assistance, Siemens turned to Seminole Community College (SCC). From this new relationship emerged one of the best examples of a true business/industry/education partnership — a model apprenticeship program between Siemens and SCC. This partnership later grew to include the Seminole County Public Schools (SCPS), which already had established a leading-edge tech prep system. Now that the system is successfully operating, the next step will be to encourage greater participation from Siemens's local business suppliers and customers.

Combining the Best of Germany and America

This education-business partnership integrates the German "dual system" of apprenticeship training and the American educational system to produce some of the best-trained telecommunications technicians in the country. It combines academics and electronics theory and lab experiences, taught in Seminole County high schools and at SCC, with hands-on training at the specially constructed Siemens Apprenticeship Training Center and in the highly technical Siemens factory. High school and college instructors provide education in the schools while a German meister brought from one of the company's German locations provides the training at the Siemens factory and the Siemens Apprenticeship Training Center.

The Siemens-SCC partnership actually is a combined tech prep and youth apprenticeship model. High school seniors do an unpaid internship (five hours a week) at the Siemens apprenticeship lab. Those who complete the internship and are accepted into SCC receive a $1,000 scholarship from Siemens. The company provides each student with a yearly stipend of about $4,500 for his or her on-the-job training. Students are exempt from paying tuition and lab fees because the program is a registered apprenticeship program, and the state of Florida exempts apprentices from such fees. (Siemens paid these expenses before the program qualified for the exemption.)

Siemens estimates it will invest between $18,000 and $20,000 per graduating student over the course of the tech prep program. This investment is less than the on-the-job training costs for a full-time employee.

Success and Recognition

Approximately 20 students are admitted to the postsecondary program each year. To date, all students of the first three graduating clases have qualified for a full-time job at one of Siemens's 14 U.S. operating companies. The positions were test technician, manufacturing technician, installation technician, installation specialist, engineer aid, customer engineer and system engineer.

The first three classes of students have outscored their German counterparts in the Siemens exit skills examination. This is the same highly technical performance-based examination administered in Germany by the country's Chamber of Industry and Commerce. The exam (there's a new one each year) covers such areas as measuring digital and analog signals, troubleshooting and repair of an exam unit in accordance with industry standards and production of one project according to blueprints.

This partnership has become a nationally acclaimed school-to-careers program. In 1992 it received a Federal Educational Partnership Program Grant from the U.S. Department of Labor, and at the first graduation ceremony on February 3, 1995, U.S. Secretary of Education Richard Riley spoke at the commencement. The Siemens-SCC program also was cited in 1996 as a first runner-up for the U.S. Department of Education's award for best vocational program in the country. In addition, the Florida Association of Community Colleges in 1993 named it the Outstanding Occupational Program in the state. Most recently, we were second place winner of the National Tech Prep Network's Exemplary Worksite Learning Award.

Siemens Corporation, which involves 25 sites nationally in its youth apprenticeship program, uses the Lake Mary project as one of its four primary "pilot models."

Program Development

Developing an electronics/telecommunications apprenticeship program that provides a seamless curriculum from high school through job placement has been a challenging yet exciting series of events. Even the original electronics apprenticeship curriculum that was brought over from Germany provided a challenge — it was written in German and had to be translated into English. It had, however, been "benchmarked" to rigorous international high performance standards.

Preliminary evaluation. It was easier to work out a youth apprenticeship program agreement in this case because SCC and the county public high schools were involved in a tech prep program that articulated a student's movement into the community college segment of his education. To "merge" the curriculum for the youth apprenticeship purpose, faculty and administrators from SCC and SCPS met extensively with Siemens representatives. Each course had to be evaluated not only competency by competency but also by level of achievement for each competency. Siemens evaluated not only the schools' technical courses but also courses in math, science and communications. These meetings produced four significant results:

- A sequenced high school curriculum that included technical, math, science and communications courses, frequently taught in an applied setting.
- Articulation agreements between SCC and specific Seminole County high schools, with the concepts of academic appraisal and dual enrollment providing a smooth transition from the secondary to the postsecondary program.
- An apprenticeship curriculum to be used in the Siemens factory and the Siemens Apprenticeship Training Center.
- An Associate of Science degree in telecommunications engineering technology from SCC.

After Siemens evaluated the SCC and SCPS electronics/telecommunications facilities, it renovated part of its existing training center into a corresponding lab that would be used to teach specific hands-on skills. Siemens later decided to move the lab to SCC and renovate four classrooms and labs to provide a corporate look that would attract both students and other industry partners. Competitors, customers, vendors and other Siemens companies would prefer to participate in a program that is located at a neutral college site rather than in a corporate-identified Siemens site.

Siemens believes it must encourage all companies to train in order to keep America competitive. The renovation includes a totally new design of the existing classrooms/labs to meet industry standards. All classrooms and labs will be equipped with the latest technology. The renovation is scheduled to be completed in January 1997.

Staff development. Before the program actually started, Siemens sponsored and financed a trip to Germany for the SCC and SCPS electronics program managers, who reviewed the German apprenticeship model of training with an eye toward incorporating parts of it into the program. Locally, participating instructors took advantage of staff development workshops in areas such as applied academics and integrating academic and vocational training.

Overcoming obstacles. Perhaps one of the greatest challenges in developing the system was overcoming the "bureaucratic" restraints of the public education system to appropriately integrate the needs and requests of business. For instance, the school system had to shorten its timelines to meet the timelines of Siemens. (When a business wants it "now," it usually means "NOW!" When a public school system wants it "now," it may mean "next week, or even next month.")

Here are just a few of the issues that had to be addressed:

- Traditional public school schedules had to be modified from 50-minute periods to longer blocks of time to allow for the required on-the-job training at the Siemens factory.

- SCC had to circumvent the normal purchasing procedures so it could outfit its new labs more quickly.

- Typical registration procedures had to be modified to enable program participants to register in groups. There were times when personnel from counseling, admissions and registration went to the Siemens plant to perform these functions with students.

- At the postsecondary level, special classes for math, science and communications were created especially for the Siemens program participants and not listed on the general printed schedule.

- The curriculum outcomes had to meet internationally benchmarked standards — nomenclature had to be changed as did the delivery of training to fit a project/product orientation.

All these tasks were accomplished, but only through much planning and communication among all the partners. Most important, all the partners had to develop a genuine trust of one another, and their communication had to be totally honest. Flexibility also was a necessity, especially in the experimental stage. (On one occasion the class schedule was changed three times, once after the schedule had already gone to press.) Working together closely has been and continues to be an essential component of the partnership. Everyone must be willing to keep an open mind and continually search for ways to improve the system.

Working together to hire instructors who were acceptable to both parties has been challenging. Admission criteria requested by Siemens had to be carefully examined to ensure that it was "valid and fair." Some of the students had considerable trouble with the higher-level math courses, and both parties had to arrange for tutors. Through their efforts, the partners were able to develop and implement a seamless, school-to-careers electronics/telecommunications program.

- Students start the electronics program in high school, and as seniors they train in the Siemens Apprenticeship Training Center after school for their school-to-work experience. (They provide their own transportation.) Five hours a week, students build projects in accordance with industry standards, although these are not products that are sold. A typical example for a project is the electronic piano. Students learn to shape the circuit board like a piano. They have to saw, file, drill and deburr the board. They learn to identify components by placing them on the circuit board. They learn how to cut component leads to specifications and to solder them. They complete a "power up protocol" and answer questions about the schematic diagram.

- Their courses articulate into the associate's degree at SCC, where they attend classes and continue to receive practical training in the Siemens lab and factory for 20 hours a week for seven semesters. The program offers 4,000 hours of training, and the students move to increasingly sophisticated responsibilities within the skill sets. They start with low-value products and advance to products that carry a selling value in excess of $1 million. During the OJT training, most of the students will have customer contact. At this time they represent the company and have to make independent decisions.
- When they graduate, they are qualified customer service technicians with specialties in telecommunications, medical products or surface mount technology. Because the program has been approved by the U.S. Department of Labor as a registered apprenticeship program, graduates are more marketable if they choose to relocate. Graduates receive a journeyman credential from the U.S. Department of Labor.

Systemic Reform

Systemic reform has been and continues to be a major thrust throughout SCPS and SCC. These institutions already had made many systemic changes to create one of Florida's exemplary tech prep systems, and they incorporated even more during the development of the partnership with Siemens.

SCPS and SCC have set high academic standards as well as high skill standards for this program.

High school students must complete at least Algebra II and Principles of Technology II. Postsecondary students must have the math skills to enter college algebra. To obtain a degree they must complete college algebra, trigonometry and general physics.

These educational institutions also are reaching out to all students, not just those in the apprenticeship program, in an effort to enable all students to be successful in some phase of today's highly technological workforce. For instance, SCPS and SCC provide alternative opportunities for students to master math and science skills. Consequently, every high school in Seminole County offers applied math and science courses as an alternative to the traditional "academic" math and science courses. Also, school-to-careers opportunities are made available to every high school student. And every high school program that is part of the tech prep system has a defined curriculum with an articulation agreement linking it to the corresponding SCC program.

Siemens fully supports this concept and these efforts because it realizes that better education benefits not only students but also employers and the economy in general. Siemens itself will benefit from these efforts because the highly technological field of telecommunications requires all its employees, not just engineers and technicians, to have a higher level of math and science skills.

Integration of Academic and Vocational-Technical Education

The educational partners were committed to developing a curriculum that integrated the academic and vocational-technical skills throughout the secondary and postsecondary programs.

Every high school in Seminole County offers applied courses in math, science and communications. (The communications courses were not renamed, but rather the English content was changed to include applications related to technology.) These courses were modeled on the CORD curriculum and then modified by local academic and vocational-technical faculty. For instance, Lyman High School, which is the primary "feeder school" into the Siemens program, has a modified class schedule providing for two-hour classes, which allows more time for actual applications activities. Also, the high school's electronics teacher and applied math teacher team- teach some of their courses.

The postsecondary program also successfully integrates academic skills with vocational-technical skills. At SCC several courses have been jointly developed by academic and vocational-technical faculty. For example, academic and vocational-technical faculty developed and team-teach "technology and the humanities for the 21st century." This course, which is designed to show how technology interacts with culture in the contemporary world, is recommended for the humanities elective. Also, English and vocational-technical faculty are designing a joint technical communications course. Similar activities are beginning within the math and science departments.

Both humanities and English are required courses for Florida college students. We have tried to revise the curriculum to make the content apply to real-life situations. For example, we now use much of the English courses to teach technical writing rather than "general" subjects. Siemens students must be able to write well in order to communicate such things as results of experiments and layout design. One of the subjects covered in humanities relates to the ethical considerations involved in working with technology.

Performance-Based Systems

In building this electronics/telecommunications apprenticeship program, the partners wanted it to be performance-driven so that the students and the program itself would be held accountable. This is necessary because all vocational-technical programs within Florida are performance-based, not only because Siemens would expect it. The SCC-Siemens partners developed these three outcome- based performance measures to evaluate the quality of the program:

1. By fall 1995, at least 50 percent of the students entering the postsecondary level of training will be tech prep students.
2. Every year at least 15 students will complete the program.
3. Every graduate of the program will be placed in the telecommunications industry, preferably within the Siemens operating companies, in Florida and throughout the rest of the United States.

These three objectives — articulation, completion and placement — were key to all three partners. Initially, the postsecondary component began by recruiting students from the general student population because there were no tech prep students available to enter the SCC program. Although the secondary electronics programs had been operational for several years, the first group of students who had participated in the 2+2 tech prep track were not due to graduate until the following year. However, since the German apprenticeship model typically brings students into the program before college, Siemens prefers to have postsecondary students who have been successful at the secondary level. The secondary program also provides generic workplace skills that enable students to choose to follow other paths than the Siemens program.

So far, the performance measures are being met almost without exception.

1. In the fall 1995 class, well over 50 percent of the students were from local tech prep programs.
2. The first and second graduating classes had 15 students, and the third had 12 (only three fewer than the goal).
3. All graduates have been placed in the telecommunications industry, the majority within Siemens companies.

The Siemens program utilizes core competencies required of such vocational-technical programs, but the program is enhanced with additional advanced competencies identified by Siemens, such as establishing customer needs and determining design workability. To complete this entire program and to receive the associated certifications, all students must master not only the core and advanced competencies, but they also must successfully complete the Siemens comprehensive skills test. This test is a three-day project-building experience, administered in the last term of the program, in which students must produce items that meet all industry standards.

All Aspects of the Industry

Although this program was developed to meet the training needs of Siemens, it is very important that students completing the program be exposed to all aspects of the electronics/telecommunications industry. By learning employability skills and industry knowledge, students not only become valuable employees for Siemens, but they also gain marketability to secure and keep a position with another company.

Of course, Siemens is very much interested in developing longtime, loyal Siemens employees, so all students who participate in the Siemens program receive a complete orientation to the company and the electrical and electronics industry. But Siemens also teaches and evaluates standard employability components (attendance, promptness, quality of work, quantity of work, work habits and interpersonal skills). In addition, students are evaluated on the scope of their job knowledge and their ability to perform many different tasks, special projects and additional assignments. Employees are evaluated on their ability to perform beyond classification requirements and on the degree to which they cooperate with others to achieve overall team objectives.

One full-time meister, one part-time meister and one administrative assistant handle the evaluation tasks along with mentors.

These are some of the employability skills and industry knowledge taught in the program:

- Safety techniques, which are a major component of all factory training.
- Planning techniques, which are emphasized through Siemens' work plan activities sheets (required for all projects). See **Exhibit 13-1.**
- Leadership skills, which are promoted through the "master student" procedure that allows students to be class (team) leaders in such areas as safety, health, environmental and OSHA standards. Leadership and task assignment are the result of team meetings.
- Product training, which is taught in the last year and involves areas of basic telephony history, billing procedures, networking, types of calls, switching systems, maintenance of labs, data technology architecture and team building.

Educating an independent and decision-making technician requires certain teaching techniques/methods. Siemens is using a method called PETRA (a German acronym that translates into Project and Transfer Oriented Training). The students are assigned a task that must be divided into single work steps. They have to name each work step, describe the tools that have to be used, how they would check this particular work step, what occupational safety and/or environmental protection rules must be observed and estimate the required time for this work step.

PETRA is more than writing a workplan. It involves cultivating personal initiative, independence and decision-making abilities in students. This demands, among other things, professional competency, responsibility for one's action as well as the ability to critically assess one's own performance. A Siemens project follows the following steps:

1. Informing (on the nature of the task and the objective, working on new contents)
2. Planning (the work plan)
3. Deciding (discussing practical work with the instructor)
4. Implementing (carrying out the task)
5. Evaluation (by the trainee and the instructor)
6. Final Interview (instructor discusses the technical results, progress and possible improvements with the trainees)

When this type of training comes directly from the employer, it means more to the student. It is one of the best direct advantages of school-to-careers programs.

Sex Equity and Special Populations

Seminole County places much emphasis on attracting members of special populations, including "nontraditional" students (girls in this case) into all its technical programs. The Siemens program is no exception. SCC offers two summer workshops to introduce young women to the nontraditional technical occupations avail-

EXHIBIT 13-1

SIEMENS INDUSTRIAL - TECHNICAL TRAINING	**WORK PLAN**	Location:	Date:
		Instructor:	Sheet:
Last Name:	First Name:	Training Semester:	No. of pieces
		Exercise:	
Training Occupation:	Specialty:	Drawing No.:	

Work steps	Planning time	Machines, tools and other aids	Testing aids	Occupational safety Environmental protection	Notes

able to them — one of which certainly is electronics/telecommunications technician. There also is a workshop to help teachers reach out to special populations. Representatives from industries, including Siemens Corporation, always are active participants at these workshops. This initiative also helps Siemens to meet its goals for diversification of the workforce.

In the workshops, students tour technical career areas and hear from speakers on technology and trends for career women. Students also take interest and aptitude tests and have the results interpreted.

Support programs are available to special needs students to help them succeed in technical programs. At SCC, the Centralized Occupational Resources and Exploration (CORE) Center offers self-paced, individualized instruction in math, communication skills and employability skills specific to various applied technology programs. There are many success stories from the CORE Center. For example, Camille was a single parent of two children, a former drug user and an ex-felon with little self-esteem and no goals. But with assistance and support from the CORE Center, and through her own perseverance and hard work, Camille graduated from the Siemens apprenticeship program. Now she is employed full-time by Siemens, earning a good salary and enjoying benefits such as a company car. Most important, though, she has found self-respect and the ability to provide for her children.

Recognition and Replication

The recognition and respect for this program come not only from government and education but also from other businesses. Siemens, SCC and SCPS often host visitors from other training institutions and industries. The partners conduct one-day site visits and training sessions in which visitors interact with instructors and tour the training center, factory and school sites. In addition, representatives from Siemens, SCC and SCPS attend many conferences to make presentations about the partnership.

This program can definitely be replicated at other sites. It works very effectively where the secondary and postsecondary education partners have a strong tech prep program already in place. In such cases, fiscal needs for curriculum development usually are smaller because they often can be built into the cost of developing and maintaining the tech prep program and thus do not require a new source of funding.

The range of expenditure varies depending on the individual business or alliance of businesses. For a program to be successful, the business partner should certainly be willing to make contributions, such as paying for some part of each student's training costs.

Ongoing Changes to the Program

Since the Siemens program was initiated, many changes have been incorporated into the program. Schedules have been shifted, and curriculum and curriculum materials are in constant revision. Also, approval of the program as a registered apprenticeship program significantly reduced Siemens's financial obligations. To qualify, Siemens sent its program standards and curriculum, including on-the-job training hours, to the Florida Department of Labor for approval. Seminole

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Community College reports the contact hours to the state and receives FTE (full time equivalent) funding for the training.

Now we encourage other telecommunications business partners to participate in the program. When that occurs, additional changes will be necessary.

Working together to develop this model partnership has been a challenging experience. All parties had to engage in "give and take" to produce such positive results. Throughout the entire process, it has been important for each party to take the time to understand the needs and procedures of the other parties. In Seminole County, what has evolved is a winning program for business and education — and, most important, for the students, our workforce of tomorrow.

Chapter 14

Small Business Model:

The Clark-Theders Insurance Agency, Inc.

By Rick Theders
President

All the small businesses in the United States, if taken together, would constitute the third largest employer in the world. The need for education to supply the workforce for these enterprises looms particularly large. America is a conglomeration of hundreds of thousands of communities made up of small businesses and individuals. The future welfare of those communities is bound tightly to the ability of small businesses to flourish, and their future growth depends on a well-prepared local workforce.

The circle cannot complete itself without a strong education component at the local level that connects education to the world of work in the community and focuses on the successful transition of students from school to work in the small businesses of that community.

Why Smaller Is Better

Small businesses find themselves in a unique position to facilitate that transition in ways that will be felt immediately and close to home. They bring specific advantages to the students and schools with which they work and add untold value to school-to-work programs. First, there are more of them. So given the reality that most students will end up working in a small business, a co-op education placement in that setting just makes better sense. For schools seeking to expand their program and recruit more businesses, small companies widen the pool of choices.

School personnel who work with small businesses do not have to cope with a complex bureaucracy or a human resource department. They normally will deal with just one person on the staff who knows the whole business very well and can answer any questions.

In a large company, a student might be pigeonholed in a certain area and see and learn only about one narrow aspect of that business. A student working in a small business, even for a short time, will see all aspects of an industry. This broad but detailed view helps students further refine their career goals.

The personal attention a small business owner can give to a student and a school may result in a more effective job training program. As part of a small group, the student is in a position to make a real difference; so naturally the owner and staff will be personally involved in making sure the student does well. In a large business, students might not get that personal attention because their impact on the enterprise is minimal.

The training a student receives while on the job at a small business can be far more individualized than in a large business. One or several staff will take the student under their wing, get to know that student's areas of expertise, identify skills to work on and provide on-the-job instruction and practice.

In many cases, a large company can appear overwhelming and unwelcoming. On the other hand, in a small business where everyone knows everyone else, an informal extended family atmosphere exists that is warmer and more comfortable for a new worker than the sometimes impersonal climate of a large business.

Commitment: Words into Action

Business owners and managers long have voiced concern over the inadequacies of the labor supply, the lack of preparation of the students that come into their workplaces and the financial burden of retraining them on the job.

As president and co-owner of an insurance agency, I decided to put my beliefs into practice. I and my wife, an elected school board member, have made it a point to be active over the years in the public schools our three children attended. Because I handled the insurance needs of the Great Oaks Institute of Technology and Career Development in Cincinnati, I was an obvious candidate for Great Oaks to call upon when the school began to expand its job training program for students.

My Responsibility as a Business Owner

In 1977, I bought an insurance business that had been in continuous operation since 1950. It is one of the oldest and most successful insurance agencies in the Cincinnati area and it has continued to grow steadily at about 20 percent per year. The agency serves individual and business insurance needs, from group health plans and home/auto insurance to professional liability and business property insurance.

I believe in a traditional work ethic, but I'm also open to new ideas in management, such as total quality principles and practice, to maintain a positive work environment. Recently, I approved a flexible time schedule that allows my 14 employees to take off every other Friday, as long as they put in 75 hours of work within a two-week period. Measures like this help morale and provide the extra incentive that retains staff. We believe in working hard and having fun.

I became an active partner in the co-op program at Great Oaks in 1978 when I welcomed my first co-op student to the insurance office. Since then, I've taken on 10 student workers. They typically work afternoons during half of their senior year. Three have become full-time employees and are working their way up the career ladder at the insurance agency. Other students have found employment elsewhere and still others decided to enter college before starting careers.

Co-op education made sense to me, and it gave me a chance to put my actions where my mouth was. I've long believed that supporting vocational education students' training is integral to the success of both vocational education and local businesses. The invitation from Great Oaks gave me the perfect opportunity to participate fully in preparing today's students for tomorrow's workplace.

Like other business owners, I'm also a parent who wants to see a broad spectrum of opportunity available to my children and grandchildren. The two roles — business owner and parent — are inseparable.

Doing Good and Doing Well

I also was quick to see the advantages of co-op education for my own business. What better way to screen potential employees? Also, since Great Oaks prepares student workers thoroughly for the office environment, I benefit from the productivity of these student employees. Students from the Great Oaks office skills program arrive on the job with knowledge of word processing, Windows 95 and office equipment operations. In addition to the hard skills, they have been taught personal and interpersonal skills, such as responsibility, getting along with others, problem-solving, critical thinking and working in teams. Moreover, they demonstrate a strong work ethic.

After the semester ends, no further obligation falls on the employer to continue to work with that student or to hire him or her. Both worker and employer can take advantage of this trial period to test the waters before making a long-term commitment.

How it works. The school assumes responsibility for all phases of the student selection, matching and facilitating the agreement between the employer and the school. Before a student arrives at my office, my vice president of operations, Donna Julliard, meets with the school counselor or instructor to outline expectations and responsibilities.

These generally include:

- Our commitment to train and mentor the student during his or her co-op assignment.

- Our commitment to report back on a regular basis — weekly in this case.

- The school's commitment to send us a student who is trained in basic office skills, willing to take on whatever is asked of him or her and able to contribute as a functioning member of the staff.

After refining expectations of one another, we reach an agreement on the kinds of work and learning the student will acquire during the program.

Why paying pays off. We pay the student on an hourly basis at a rate above the minimum wage. Although some programs across the country offer unpaid work experiences to students, I believe paying students provides a better incentive for them to do their best. It also helps the school make the match. Paying the student worker establishes a professional relationship between employer and employee. Whereas an unpaid student may think and behave more like a volunteer and take on less responsibility, a paid student realizes he or she must earn wages by performing as a productive member of the staff.

Dee Dee climbs the career ladder. Dee Dee, a senior at Great Oaks, came to Clark-Theders in winter 1996. At the agency, Dee Dee was given the opportunity to learn the insurance business from the ground up, and she took on that task with enthusiasm. She handled mail, answered the phones, filed, typed, ordered reports, assembled presentation packages and got involved with proposal production. In the process she became familiar with insurance terms and with the field as a whole.

Three weeks into Dee Dee's co-op program, I knew she was a keeper. She arrived fully prepared, equipped with all the necessary skills and an outstanding attitude. Dee Dee was willing to do all that we asked of her.

Dee Dee had been a captain in the Marine Corps Junior ROTC program, served as a class spokesperson and was involved in a leadership development program at Great Oaks. She had already decided her career path and wanted to find an office job directly following graduation.

After interviewing for several different positions with local businesses, Dee Dee accepted the job offer of receptionist at Clark-Theders Insurance Agency.

But the success story does not end there. Not long after Dee Dee joined the staff, there was an opening for a commercial lines assistant to handle insurance needs for company car fleets and professional liability needs, among other areas. Although Dee Dee did not have the normally required skills and experience for that position, her attitude and on-the-job performance convinced both me and Donna Julliard that we should give her a shot. Never for a moment have we regretted our decision.

Belinda: Voc ed is not just for kids. After a divorce, Belinda, a single mother of two children, was without any marketable skills. She'd been out of the workforce for years raising her family. Now, to re-enter the workforce, she knew she needed additional training. Great Oaks attracted her because of the co-op education program and the placement service. As a postsecondary student, she would be eligible to participate in these programs and get a foot in the door of a new career. Belinda was matched up with Clark-Theders, and she made such an impression on us that we hired her as office receptionist after she completed her training at Great Oaks.

One year later, after Belinda had learned a lot about the insurance business and established herself as a vital part of the team, she was promoted to a new job within the company as an assistant to agents who handle "personal lines" of insurance, such as for auto, home, jewelry and other personal property. Her success in re-entering the job market and advancing within her chosen field gives true-life testimony to the value of vocational education and school-to-work programs for people of various ages and life situations.

Everybody Wins

Students profit from school-to-work programs in many ways. For Dee Dee and Belinda, it resulted in a good job right after graduation. Other students use the work training as leverage in finding a job. Some learn what they need to improve on and are able to fine-tune their career goals. All go into the after-graduation job search with a leg up on the competition.

The Great Oaks graduates I interview are always distinguishable from other young applicants. They've learned how to present themselves, how to dress for an interview and how to handle various questions. This gives them a marked advantage over other candidates in the local workforce. The confidence they gain on the job is invaluable when they approach another employer. And when they face that first day on the job, they are less anxious because they have an idea of what to expect.

Getting a true feel for a prospective employee and whether the match is a good one certainly heads the list of the benefits that accrue to small business owners who work with educators. I am able to try out students like Dee Dee and Belinda without any obligation. If the match works out well, there's the possibility of acquiring a good employee. If not, I've helped that student prepare for a job in another place or perhaps helped him get closer to knowing what he wants to do after school.

Some students may come in here and discover that insurance isn't for them, or even that they don't want to go right into a job after graduation. That's the uniquely wonderful thing about an education that gets young people focused on career paths they can follow either directly into the workforce, to further training or to higher education.

The benefits are far from one-sided. Great Oaks knows it can depend on my agency to provide the students they send me with a real-world experience, which enriches the institute's education program and allows its graduates to step into their first job with confidence.

The active partnership of business leaders can be a great asset to schools not only in the immediate case of placing students in workplaces but in reaching out to other members of the business community. To help Great Oaks increase its capacity in school-to-work programs, I make sure that my colleagues in the business community know about the school and its job training programs. I frequently address local business and community groups to point out the critical need for them to become active in school-to-work programs. I know that recruiting other businesses into the program will enable the school to continue to give more students the chance to work for a portion of their senior year.

Supply and Demand

The biggest issue facing school-to-work programs mirrors the most serious problem confronting employers—not having enough qualified workers to fill jobs in many occupational areas such as manufacturing and construction trades. This plays out at the co-op and job training level, where an insufficient number of students are able to participate in programs that include on-the-job work experience as part of the curriculum.

The solution involves a proactive stance by both employers and educational institutions. We must reach out to one another to form stronger and more numerous partnerships.

I urge small business employers to approach schools to see how they can help recruit students into vocational-technical programs so they will have a pool of well-prepared individuals to choose from.

To complain about the situation without doing something about it is tantamount to contributing to the problem. Small businesses can help solve their labor supply problem by starting at the beginning of the chain and working with their local vocational-technical centers in the apprenticeship or co-op program.

I have seen no downside at all to my venture with Great Oaks. Moreover, if the Great Oaks-Theders partnership is typical, the process of getting involved is simple and convenient. My office deals with only one person at the school. Aside from the expectations noted above, there's no extra paperwork, meetings or hassles to surmount.

A change of mind and heart. Several years ago, Donna Julliard had been working at Clark-Theders for a few years and had supervised several voc ed students in the co-op program. It was her first knowledge and contact with vocational education and she was duly impressed with the students' motivation, skills and goal orientation.

RICK THEDERS* *is president of Clark-Theders Insurance Agency in Cincinnati, Ohio.

Coincidentally, Donna was dealing with a career issue at home. Her daughter Jennifer, bright but directionless, was not sure what she wanted to do after graduation. Then, Donna had an "aha" moment when she realized the possible connection between her child's problem and the students she had worked with: vocational education. A few years back she would not have considered vocational training an option, but through her direct experience with the products of the system Donna's opinion had drastically changed. She suggested vocational education to her daughter and was able to persuade her to look into the county voc ed center. Julie subsequently enrolled in the health occupations program and graduated one year later. Currently, she is happy and thriving in a productive career, working with mentally challenged adults and at the same time attending college to pursue physical therapy. Jennifer's career choice and path are a direct result of the exposure she gained to various health fields in her vocational education studies.

Nothing is more compelling than word-of-mouth advertising. A powerful ripple effect ensues when Dee Dee and Belinda share their experiences with their friends and relatives and those people spread the story to their friends and relatives. This works better than the most well-planned and executed publicity campaign. Nothing sells like success, and the success stories of students who've not only landed a job but built a career as a direct result of vocational education and school-to-work programs are legion.

Sometimes motivated by the economics and politics of the public money that follows students, sending high schools have been guilty of ignoring area vocational-technical schools, if not outright dissuading students from attending them. Responsible school personnel must discard such selfish concerns in favor of serving the students' best interests. For many junior and senior high schoolers, vocational education is a better answer than the regular academic program, and for some, it may be the only solution.

Pitching the curve. I use the model of the bell curve to illustrate the range of student needs that must be considered when deciding on a career path. At one end of the curve are the students who are definitely headed toward a four-year college degree. They've chosen professions that require that path and have demonstrated the ability to achieve those goals. At the other end are the students who are unable to pursue a four-year degree because their options are limited by their circumstance or abilities.

In the middle is the large group that comprises the huge hump of the curve. They bounce around like a ping pong ball without direction. For them, there's no defined progression from school to career. They are without a clear path. It's for this group that vocational and school-to-work education can do the most good. Students who enter a career program are not corralled into one path. They may keep their options open while pursuing academic subjects, taking vocational classes, undergoing career counseling and experiencing a co-op program. In this way, they are led to discover what they want to do with their lives.

Teachers and counselors work together to illuminate the paths students can follow and bring clarity to how they can achieve their goals. School-to-work programs, such as the co-op program at Great Oaks, play a pivotal role for students finding their way. The message to students is: "Here are many things that life and the world of work can offer you — and here's how to get them."

It will take the commitment of many individuals to make school-to-work programs successful. The commitment needs to happen at the personal level. Don't leave it to someone else. It may very well be your own child or grandchild who will one day benefit from a school-to-work program — and it most definitely will be your community, now and in the future, that gains immeasurably.

Words of Advice

Here are some tips I'd like to pass on to educators who want to approach and work with small business partners:

- To recruit more small business partners, pick up the phone, walk around the neighborhood and ask for their participation. Some businesses are not even aware that their participation in school-to-work programs is wanted and needed. Others may think it complicated or burdensome. Let them know that the quality of student workers has improved greatly in recent years and tell them how they stand to benefit from the program.
- Don't underestimate the value of an appeal to their desire to do something good for the community by getting actively involved in school programs.
- Once a business has signed up, go to the work site and get to know the business and its people. This will help you make better matches between employers and students.
- Make sure the work site is a safe and positive place for students. Trust your own gut reaction. If you wouldn't care to spend a semester there, neither would a student.
- After placing a student, respond to weekly reports with a phone call and keep an eye out for any red flags.
- At the end of each semester, encourage students to share both good and bad co-op experiences with students, teachers and counselors. This will improve your program, weed out possible problem sites and help spread the good word among the student population.
- Publicly acknowledge the employers who participate in your programs. It's good public relations for them and will help you attract more small business.
- Do something special once a year. An end-of-the-year dinner, for instance, can help cement good relationships and is a meaningful and enjoyable way to recognize employer partners.

And now, to my fellow small business owners:

- Get involved! Ask the schools and other business leaders about the benefits of a partnership with the school.
- Be open to an entirely new image of the student worker. Things have changed a lot in the past decade and schools are doing a good job of preparing students for employment. The student who comes to your office or plant will be an asset.
- After deciding to get involved, simply pick up the phone and call the placement coordinator in a local school that has implemented a school-to-work system. Tell them you are interested in becoming a part of their job training or student co-op program. From that point on, the school will take care of the placement and administration.
- Make sure the school can provide a student with the qualifications you need.
- Let the school know about any problems right away and do your part to keep the communication flowing.

Chapter 15

Model of an Effective Partnership in the Government/Public Service Sector

Pennsylvania Department of Transportation

By John A. Polto
Dauphin County Technical School

Dauphin County Technical School is a full-time area vocational/technical school that serves high school students in Harrisburg, Pennsylvania. In operation for 27 years, DCTS always has used the "full-time" delivery system, which means we offer both vocational and academic courses. For the past 13 years we have been pioneers in the integration of curriculum. As a result, it has been increasingly important that we develop partnerships with area businesses.

Much of our instruction, both vocational and academic, is based on "real world" examples and experiences that are varied, valuable and in line with the competencies that our business advisory committees have determined to be important. With that in mind, many area employers sit on our advisory committees to have a voice in the selection of the competencies our school programs will teach.

Although we have partnerships with private companies of all sizes, one of the most unique and successful partnerships has been forged with our state governmental agencies.

Our relationship with the Pennsylvania Department of Transportation (Penn DOT) began during the 1985-86 school year. It was something of a mutual plan. We at DCTS needed some additional co-op placements for students' "real world" work experience and Penn DOT needed willing individuals to do some part-time, short-term jobs mostly in the areas of drafting (sketching parts for plows and trucks) and computer data entry (such as crew scheduling for highway construction and maintenance).

Penn DOT was glad to have the opportunity to "give back" to the community—to help in the education of these students to strengthen the state's future workforce. Transportation officials got to explain and enforce those work ethics that are talked about a lot but are very rarely demonstrated in addition to the skills specific for the jobs.

Normally, a student placement at Penn DOT runs anywhere from four months to the full senior year. DCTS students spend one week in their vocational labs and work placements and one week in academic classes. This enables students to spend a full work week on the job. Another advantage is that we can place two students in one job — while one student is working, the other is taking academic classes.

The student interns are performing real work for Penn DOT. This is not a simulated experience, although state rules require that the students not take the place of another worker. Students in these co-op placements get credit for their vocational program, and they also get paid (usually minimum wage). Each week the seniors spend two periods in their vocational labs and classrooms to touch base with their teachers and to cover the curriculum.

Because of its early success, the internship program was expanded to include students in other vocational schools throughout Pennsylvania. And we have used the model to develop partnerships with the departments of commerce, finance, corrections, health and welfare, general services and the state police.

Setting Up a System

In the early years, DCTS would deal directly with individual sections of Penn DOT, such as District 8-0 or the Bureau of Motor Vehicles. Each section head was solely responsible for the selection of students for their own department. For the past several years, however, the Division of State Employment (now the Bureau of State Employment) has been the central point for school program coordinators. One member of the bureau is designated liaison for the educators.

Penn DOT and all other state departments now must go through the BSE coordinator with their requests. This coordinator then works with the schools to recruit students for available positions and refers student-trainee candidates to the agencies for interviews. Sometimes the school co-op coordinator calls the state coordinator to let him know of students who are ready for work experience, and other times the state coordinator calls the school with news of available positions. In either case, the co-op coordinator will bring a few students in to interview for each position.

We send only qualified, mature and responsible candidates for these valuable work experiences. Teachers, counselors, the school nurse, the business office and the principal all must sign a form to recommend each student for a co-op position, and students must clearly understand their responsibilities. **Exhibits 15-1** and **15-2** are the forms DCTS uses for these purposes.

Once a student is hired, both sides must fill out a ream of paperwork, which is always the case with any co-op education experience **(see Exhibits 15-3 to 15-5).**

A student intern usually reports to one supervisor at the job site. While DCTS provides no special training for these supervisors, the co-op coordinators do give employers a list that spells out the tasks the students are able to perform. They make clear that the work students are assigned should improve on those skills and offer an experience that the school itself could not provide. Every two weeks, the co-op coordinators visit the work site to talk with supervisors for "quality control" and to ensure that the student is making progress. DCTS gives supervisors a student-trainee progress report form to fill out at the end of the experience **(Exhibit 15-6),** and the student's grade is based largely on the supervisor's evaluation.

The state government often is an area's largest employer, but schools traditionally have not taken advantage of co-op placements with the public sector. In our case, we had a need so we took a chance and called the state capitol. They said, "Gee, we didn't know you could do this."

Each year, on average, DCTS has had four to five student-trainees placed in various Penn DOT divisions, including Transportation and Safety, Engineering District 8-0 and the District Maintenance Office. Students come from a range of vocational programs, including automotive technology, collision technology, precision metalworking, drafting and design technology and data processing. With the addition of the other governmental agencies, we have been able to provide opportunities for other students in the fields of graphic arts, commercial arts, law enforcement, ornamental horticulture, building construction and maintenance, carpentry, electrical construction, masonry and health occupations.

Recently, DCTS formed a partnership between Commonwealth Media Services (the governmental agency that videotapes many state functions) and the communication division of the DCTS electronics technology program. Our students will help state employees in all aspects of videotaping, including directing and editing.

Public vs. Private

DCTS has a school-to-work coordinator (cooperative education supervisor) who directs the internship program. A cooperative education coordinator and a secretary assist. An adult education supervisor also works in the same area and can offer expertise.

The STW coordinator acts as a liaison between the school and the workplace to ensure open communication lines and free-flowing information between the educators and the supervisors, personnel contacts in the district office and the main Penn DOT office and the BSE coordinator. It's a little more cumbersome than a partnership with a private company, wherein educators will deal with a few contacts in one office. But, for a government program, the process flows surprisingly smoothly.

In addition to the layers of bureaucracy being compounded, there are a few other major differences in partnerships between education and government agencies compared with partnerships between schools and private companies. First, the rate of pay is below that of private industry. Our state government typically pays students the minimum wage and no more while private companies can pay significantly more, so placements in the government internships are less attractive to students. Also, there is little or no chance for permanent placement following graduation.

In the 11 years of this partnership, three DCTS student interns have been hired to full-time positions. This is not a very good record, but there are reasons for the low placement. Civil Service requirements mandate more than a high school education for several of the positions for which interns are training (such as drafting). We at DCTS have met with supervisors at Penn DOT to recommend that the requirements be changed, but that process would be about as easy as amending the Constitution. Governmental agencies are very slow to act or react to problems of this sort.

Given the situation, DCTS tries to arrange the government internships only for students who express an interest in governmental processes or who have a desire to proceed with their postsecondary education or enter the military.

JOHN A. POLTO is vocational administrative director for Dauphin County Technical School in Harrisburg, Pennsylvania.

Plenty of Options

Students who do enroll in the Penn DOT program get a solid foundation in state government processes. They also learn good technical skills in areas such as drafting and data processing. Those students who do wish to apply for a government job upon completion of the program are given some priority consideration. Those who seek employment in private industry in the same or related occupational area have a good reference base and some excellent practical work experience to take with them. Supervisors often have contacts with private industry and can refer student interns for jobs.

However, most of the DCTS students who take the Penn DOT placements in recent years have enrolled in higher education to continue in their chosen profession. These students then have the option to return to work in a summer internship program (sponsored by the governmental agency) while enrolled in their postsecondary programs. When they graduate, these students are encouraged to take their Civil Service examination and apply for full-time employment with a state agency.

Penn DOT personnel (from supervisors to co-workers to human resource professionals) say our students are very competent in their technical skill area, have good work ethics, have an excellent academic background and come well prepared to the interview when compared with other job seekers. DCTS has used the Penn DOT example to form many other business partnerships with other governmental agencies, small and large businesses and a public utility (Pennsylvania Power & Light).

EXHIBIT 15-1 RECOMMENDATION FOR ENTRANCE INTO THE COOPERATIVE EDUCATION PROGRAM

Student Shop Date

TEACHER RECOMMENDATION: Initiate this form only when you feel a student should be recommended for the Cooperative Education Program.

COMMENTS: ______________________________

Teacher Signature: ______________________________ Date: __________

GUIDANCE EVALUATION	YES	NO
Student is maintaining a 70% with no failures or incompletes	___	___
Student is maintaining an acceptable attendance record	___	___
Student is recommended for placement	___	___

COMMENTS: ______________________________

Guidance Counselor Signature: ______________________________ Date: __________

NURSE'S RECOMMENDATION

The student is _____ is not _____ recommended for placement.

COMMENTS: ______________________________

Nurse's Signature: ______________________________ Date: __________

BUSINESS OFFICE RECOMMENDATION

The student is _____ is not _____ recommended for placement.

COMMENTS: ______________________________

Business Office Signature: ______________________________ Date: __________

PRINCIPAL'S EVALUATION AND RECOMMENDATION

The student is approved ______ not approved ______ for entrance into the Cooperative Education Program.

COMMENTS: ______________________________

Principal's Signature: ______________________________ Date: __________

PLACEMENT: ______________________________

EXHIBIT 15-2. RULES AND REGULATIONS FOR STUDENT TRAINEES IN THE COOPERATIVE EDUCATION PROGRAM

Before you, the student, can begin your co-op work experience, it is absolutely essential that certain rules and regulations be strictly observed. The employer is taking his/her time to train and guide you through work experience in your chosen field. You will be receiving academic credit for approved work experience in the program. You are preparing for the world of work and establishing a reputation and record that will follow you after graduation. Therefore, it should be understood from the start that any student who does not take their work and responsibilities seriously or fails to abide by any of these rules and regulations or those of the employer will be immediately terminated from the Cooperative Education Program and returned to the shop schedule.

1. To be eligible for and remain in the Co-op Program, the following guidelines must be met:
   (a) recommendation by the shop instructor
   (b) 70% average with no failures or incompletes (shop and academic)
   © no more than three absences per marking period
   (d) acceptable behavior (to be determined by the school principal)

2. No student trainee will be excused from school to go to work without a completed Training Agreement and Training Plan. Those students under age 18 also must have working papers on file.

3. Students may not leave their job or accept other employment without consultation with and approval of the coordinator.

4. The student must provide his/her own transportation to and from the place of employment.

5. If students cannot report to work for any reason they must call the employer. The students also must contact the attendance clerk before 9:00 a.m.

6. Students are required to work during school vacations if the employer needs them. Work schedule arrangements should be made if there is inclement weather.

7. A signed Weekly Work Report must be turned in and discussed with the shop instructor each week during an agreed-upon study hall period. A copy is to be brought to the Co-op Office. Failure to keep the Work Reports current may result in an incomplete grade for the marking period or removal from the Co-op Program.

8. The following should be brought to the immediate attention of the Co-op Coordinators:
   (a) any change concerning wages, hours or job tasks
   (b) layoff or termination
   (c) difficulties with job or school

9. Students must report to their vocational or technical shop when they do not have to report to work. Under no circumstances are students to stay home when they do not need to report to work.

19. INFORMATION REGARDING SATURDAY DETENTION AND TARDIES TO SCHOOL THAT AFFECT CO-OP:

Saturday Detention

a. Procedure for dealing with students who miss Saturday Detention—will be called to the office during the homeroom period and will be put in in-school suspension for two days and assigned to the next Saturday Detention.

B. Students who are in co-op and students who have driving privileges could be pulled out of co-op and lose their driving privileges or eligibility to get them.

11. All students who participate in cooperative education work experience will be required to attend the annual Employer-Employee Banquet in April.

12. If a student trainee is laid off, the student cannot apply for unemployment compensation benefits per the Unemployment Compensation Law of Pennsylvania, as amended in 1971.

It is important that all involved individuals understand and agree to the above regulations.

Student's Signature ____________________

Parent or Guardian's Signature ____________________

EXHIBIT 15-3:

DAUPHIN COUNTY TECHNICAL SCHOOL
COOPERATIVE EDUCATION TRAINING PLAN

STUDENT ______________________________ DATE OF PLACEMENT ___________________

EMPLOYER ______________________________ SUPERVISOR __________________________

The student must report any accidents or injury to the employer and to the Cooperative Education Coordinator immediately.

The student should receive training in proper safety procedures as relates to the occupation and should observe safe work habits. The student will use the necessary safety equipment when appropriate and necessary.

The student will take part in training established by the employer with regard to the use, handling and storage of hazardous substances as outlined in the Right-to-Know Law (P.L. 1984-159)

TRAINING PLAN

The student will receive training and perform the following duties:

EXHIBIT 15.4 DAUPHIN COUNTY TECHNICAL SCHOOL TRAINING AGREEMENT FOR COOPERATIVE EDUCATION

DAUPHIN COUNTY TECHNICAL SCHOOL
6001 Locust Lane
Harrisburg, PA 17109
Telephone (717) 652-3170 FAX (717) 652-9326

TRAINING AGREEMENT FOR COOPERATIVE EDUCATION

Pennsylvania Vocational Education Regulations and Standards and Pennsylvania and Federal Child Labor Laws require a written training agreement and training plan for each student in a vocational cooperative education program.

Student Name:	Social Security Number:		
Address:	Telephone:		
City/State:	ZIP:	Birthdate:	Age:
Job Title:	Career Objective:	Work Permit:	
Dates of Employment:	Beginning:	Ending:	
Weekly Hours:	M-F 9 a.m. to 3 p.m.	Rate:	
Training Agency:		Training Supervisor:	
Address:		Telephone:	
City/State:	ZIP:	Page/Cell/Beeper:	
Workers Compensation No.:		Federal ID No.:	

EMPLOYER/TRAINING SITE RESPONSIBILITIES:

1. The employer/training site will adhere to all State and Federal regulations regarding employment, child labor laws, minimum wages and workers compensation.
2. The student will be given a variety of work assignments and be supervised by an experienced person.
3. A periodic evaluation of job progress will be made by the training supervisor on a rating form provided by the school.
4. The training supervisor will arrange a conference with the Coordinator when a trainee problem arises.
5. The training sponsor will provide necessary safety instruction throughout student training period.
6. Employer/training site will not employ a student-learner to displace a regular worker.
7. Exposure to hazardous work will be incidental to the student's training and not a part of the training program.
8. The employer is not liable to the unemployment compensation fund wages paid to the student while under the training program. This is provided in Section 4L4 10C in Pennsylvania Unemployment Compensation Law.

STUDENT LEARNER RESPONSIBILITIES:

1. The student agrees to perform the assigned duties in a loyal manner and work to the best interests of all concerned.
2. Student agrees to report job problems to training supervisor and coordinator.
3. Student will adhere to company policy: employment may be terminated for the same reasons as regular employees.

4. The student learner must be regular in attendance at school and on the job. If unable to report to work the employer and coordinator will be notified before the start of the normal work day.
5. The student learner must maintain passing average in all school subjects. Failure to do so can result in termination.
6. The student learner's employment will be terminated upon withdrawal from school.
7. The student learner will report to school for designated meetings and related instruction.
8. The student learner must provide own transportation to the job site.
9. The student learner will report to school on days when no work in scheduled.
10. The student learner must meet with the shop instructor during the academic week to review the work report.

SCHOOL RESPONSIBILITIES

1. The program is under the direct supervision of a certified cooperative education coordinator.
2. The student learner will receive related instruction and safety instruction from the occupational instructor or the cooperative education coordinator prior to job placement.
3. The coordinator will visit the student and training supervisor on a regular basis at the work site.
4. Dauphin County Technical School will not discriminate on the basis of race, sex, national origin, color, handicap or disadvantage.

Employee/Training sites of Cooperative Education students shall not discriminate in educational program activities or employment practices based on race, color, national origin, sex, sexual orientation, disability, age, religion, ancestry, union membership or any other legally protected classification. Announcement of this policy is in accordance with state and federal laws including Title IX of the Education Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990.

This memorandum is for the purpose of outlining the agreement between the school and employer on the conditions of training to be given a student while on the job. Therefore, it should not be interpreted by either agency as a legal document or any form of binding contract.

We the undersigned agree to the conditions and statements contained in this agreement.

Student Learner	Date	Parent/Guardian	Date
Employer	Date	Coordinator	Date

EXHIBIT 15-5: DAUPHIN COUNTY TECHNICAL SCHOOL RELEASE SHEET

COOPERATIVE EDUCATION STUDENTS

NAME ____________________ SHOP ____________________

PLACE OF EMPLOYMENT ________________________________

STARTING DATE ____________________ A WEEK ____________________

B WEEK ____________________ DATE ____________________

The following items must be completed prior to the start of employment:

1. Notify Vocational Instructor
2. Notify Attendance Clerk
3. Notify School Nurse
4. Notify Home Room Teacher
5. Notify Business Office
6. Notify Phys Ed Teacher
7. Notify Study Hall Teacher

This form must be completed and returned to the Cooperative Education Office prior to being released from school to begin co-op.

____________________ ____________________

Coordinator Working Papers

RETURN SHEET

If, for any reason, you are removed from co-op, notify the following persons:

1. Vocational Instructor
2. Attendance Clerk
3. Home Room Teacher
4. School Nurse
5. Phys Ed Teacher
6. Study Hall Teacher

____________________ has been permanently terminated. The final day of co-op is/was __________.

____________________ has been temporarily laid off. The date for return will be __________.

EXHIBIT 15.6 SAMPLE PROGRESS REPORT FORM

DAUPHIN COUNTY TECHNICAL SCHOOL
6001 Locust Lane
Harrisburg, PA 17109
Phone: 652-3170

Shop ________________
Week ________________

STUDENT-TRAINEE PROGRESS REPORT

In order for the school to determine a grade for the student Co-Op experience we would appreciate if you would take a few moments to evaluate the general competencies listed below using the evaluation key. Place the numerical value in the appropriate training period.

EVALUATION KEY

4 - Very Good	(A)
3 - Good	(B)
2 - Average	(C)
1 - Below Average	(D)
0 - Unsatisfactory	(F)

NAME OF STUDENT TRAINEE ____________________
NAME OF TRAINING STATION ____________________
NAME OF TRAINING SPONSOR ____________________

Evaluator's Initials

TRAINING PERIOD #1 ________ to ________ ________
#2 ________ to ________ ________
#3 ________ to ________ ________
#4 ________ to ________ ________

			TRAINING PERIOD			
			1.	2.	3.	4.
1.	ATTENDANCE	Reports to work regularly as scheduled.				
2.	PUNCTUALITY	Reports to work on time.				
3.	QUANTITY OF WORK	Performs all tasks assigned productively and promptly.				
4.	QUALITY OF WORK	Performs tasks accurately, correctly and thoroughly.				
5.	JOB KNOWLEDGE	Exhibits knowledge and skills needed to perform the job.				
6.	HOUSEKEEPING	Keeps work area clean and orderly.				
7.	JOB TRAINING	Speed with which student learns new tasks.				
8.	SAFETY	Practices prescribed safety measures.				
9.	FLEXIBILITY	Adapts to a variety of situations and assignments on the job site.				
10.	RESPONSIBILITY	Assurance that assignment will be carried out.				
11.	ATTITUDE	Shows interest and enthusiasm on the job.				
12.	INITIATIVE	Is a self starter and takes the lead in getting things done.				
13.	COOPERATION	Acts in a friendly & appropriate manner with co-workers, supervisors & customers.				
14.	MATURITY	Displays appropriate personal conduct.				
15.	APPEARANCE	Practices dress and personal grooming suitable for work.				
		TOTAL POINTS				
		AVERAGE GRADE (Divide by 15)				

Area's Needing Improvement

Major Strengths

Chapter 16

Vocational Student Organizations

By Alice Potosky

If ever a structure were tailor-made to initiate and maintain powerful partnerships between business and education and enhance school-to-work programs, it would be the national network of vocational student organizations (VSOs). For years they have linked local businesses and vocational education programs through competitive events and work-based projects. Many employers are so impressed with VSOs that they sign on as major sponsors of skills competitions and promotional campaigns.

The local clubs of BPA, FBLA, FHA, HOSA, DECA, FFA, TSA and VICA (see box) are closely involved in partnership building and school-to-work programs. They form an integral component of these programs and broaden the ability of schools to give every student some type of work-based learning experience. VSO participation demonstrably benefits the schools and businesses they work with and rewards the students themselves.

Extending the School's Resources

VSO activities offer a natural extension of the school-to-work program. A school can rarely send all students out to an employer's work site. Far more students are likely to gain work experience by taking part in school enterprises, competitions, community service projects and other VSO programs that simulate a work experience. An active VSO can substitute quite well for a co-op program, internship, apprenticeship or other on-site training program when few off-site slots are available for students. VSOs thus extend the school's ability to provide students with work-based learning and enable all who desire a chance to participate in school-to-work activities.

VSO activities often introduce the school to prospective employer-partners for the co-op or job training program. Likewise, business and industry leaders get to know the school and students through VSO projects. Inviting a business person to speak to the club or the student body may well be the first step in building an active partnership.

Relating the Curriculum

VSOs help bridge the gap between real-world needs and school instruction. They help ensure the curriculum makes sense to students in the context of the careers

The Vocational Student Organizations

- Business Professionals of America (BPA) — (614) 895-7277
- Future Business Leaders of America (FBLA) — (703) 860-3334
- Future Homemakers of America (FHA) — (703) 476-4900
- Health Occupations Students of America — (HOSA) (972) 506-9780
- National DECA (Marketing Education) — (703) 860-5000
- National FFA (Future Farmers of America) — (703) 360-3600
- Technology Student Association (TSA) — (703) 860-9000
- Vocational Industrial Clubs of America (VICA) — (703) 777-8810

Each group maintains its own national headquarters and state affiliates and belongs to the National Coordinating Council for Vocational Student Organizations. The American Vocational Association serves as a conduit among the groups and hosts regular meetings where representatives from the VSOs can address common concerns.

they are pursuing. On the national level, the VSO headquarters collaborate with industry leaders to develop appropriate curriculum. Locally, VSO members bring business leaders into the schools to help keep curriculum current and on target.

This interaction makes the curriculum relevant for all students. By learning how they will actually use math, science and English, they begin to recognize the importance of the academic subjects. For example, a future home builder will learn how he will use geometry in that work and will become more motivated to study it. In the long term, this relevance keeps students in school, helping to stem dropout rates.

VSOs have taken additional measures to keep classroom and work-site curriculum parallel. Work-based and school-based learning need to progress along the same path at the same rate. Frequent discussions between employers and VSOs at the national, state and local levels have led to changes in the sequencing of courses. As a result, schools have placed simple and generalized concepts before complex and specific ones, have moved instruction in proper work habits to the beginning of a course before students are placed in work experience and have started students earlier on project-based learning.

The curriculum linkage extends to the VSO's competitive events, which are main attractions for their members. VICA's Skills USA Championships and FHA's STAR events, for example, attract hundreds of students who have won competitions at regional and state levels in their categories. There's an event for every skill the students are learning, from computer-aided drafting to public speaking. Because the competencies specified by the appropriate industry and occupational group are included in these events, students develop skills that make them more employable.

Developing Students' Skills

Above and beyond the technical skills they gain through work experience, the students develop self-esteem and self-confidence. Many come out of VSO school-to-work activities such as competitions, job training and school enterprises with a whole new self-concept and belief in what they can accomplish.

Although the hard skills students acquire are what can get them into a particular job, the soft skills they develop also will aid them throughout their careers. That's why VSO activities facilitate the development of problem-solving, critical thinking, creativity, teamwork, responsibility, and communication skills. Equally important are those skills VSO students acquire that they will need in both their work and personal lives, such as managing a paycheck, overall financial planning, public speaking, resume writing, self-marketing, interviewing and interpersonal relations.

When introduced to VSO members, business people often are struck by the students' poise and self-confidence. These young people, clad in their distinctive club blazers and speaking professionally, are a welcome sight to employers who may have a misimpression of all teens as sloppy, disrespectful, tattoo-sporting "slackers."

A look at the real-life stories of the VSO school programs and student members who are engaging in creative partnerships reveals the critical role they perform. Here's a small sample of these multifaceted programs, presenting powerful testimony to the value of VSO involvement in connecting school and work.

Filling in the Gap for Small Businesses

In the small town of Superior, Montana, DECA students from Superior High School are making a real difference to local business while gaining valuable job training.

The business owners of Superior do not enjoy all the resources available to larger towns. Fortunately, the students are willing and able to fill the gap. In this case, the needs of business for students' unique skills mesh perfectly with the students' need for a real-world working experience.

As part of their course work, club members carry out an assortment of marketing projects. Recently, one group produced a tri-fold brochure and tourist guide for the local chamber of commerce to promote the area's environment and culture. They also spoke at community functions and produced a companion multimedia presentation.

Connecting activities offer businesses an immediate, tangible benefit for their partnership with schools. Students form a close link with businesses by conducting computer software training for their staffs using school equipment and facilities. Students also actively recruit speakers from the business community to address the school.

The students' efforts result in material as well as intellectual rewards. From the income earned through these projects, they are able to fund their trips to state competitions and national conferences.

Tech Prep Partnership

The tech prep program at Tri-Rivers Career Center in Marion, Ohio, models a productive partnership between high school and postsecondary vocational education. Tri-Rivers works with Marion Technical College to offer internship activities and counseling as early as middle school. The partners train mentors for their job-shadow program and work with local employers to arrange paid summer work experience for graduating seniors.

All students in the program are members of the Business Professionals of America (BPA). Through the VSO students learn needed skills—teamwork, communication, responsibility and problem solving. They also participate in community service projects that allow them to strengthen their leadership skills and put them in front of prospective employers.

Complex and Productive

The Saginaw Career Complex, in Saginaw, Michigan, is an ambitious project that ultimately will include career preparation in six fields: arts and communication, business services technology, education and human services, environmental technologies, health services and technical and engineering systems.

The technical and engineering systems component, including construction, electro-mechanical engineering and design, manufacturing and automotive/transportation, is one of two career pathways now housed within the Academy for Technology and Enterprise, a charter school at the complex. A partnership of area businesses, labor unions and colleges directs the program.

Students in the program must meet certain conditions and responsibilities. They must maintain at least a B average, must not miss work or school more than 5 percent of the time and exhibit what is known as the "code of cooperation." Students generally are members of the local VICA chapter.

Combining one and three-quarter hours a day of instruction and two hours of work-based learning, the program revolves around an integrated and carefully sequenced progression of learning. SCANS competencies are built into the curriculum and students discover how their math and technology skills will apply in the workplace, and they acquire effective communication and teamworking skills. Their work-based learning includes of a series of "exploratory experiences" in which they spend three weeks at a work site shadowing employees in various departments to learn different facets of the industry. Teachers and supervisors arrange part-time work during the junior or senior years as well as summer employment during the two-year program.

One such arrangement was particularly fruitful. An engineering/drafting student spent his summer working with Wright-K Technology, a General Motors contractor that makes the machines that produce parts for automobiles. Using his computer drafting skills, he designed a part that the Delphi Saginaw Steering Division of GM subsequently patented.

In another example, a VICA student spent his junior year working part-time at Shield Manufacturing, which produces machine tool parts. He performed basic production work, such as milling and grinding. After gaining sufficient skills, he moved on to a better position with a small machine shop, where he was able to perform more varied and interesting work at a higher wage. He has since graduated and is working full-time for that employer.

At the end of the program, students receive a certificate acknowledging their successful completion and readiness for their chosen careers. This "marketable skills certification" incorporates the SCANS competencies, technical skills, graduation from high school, the code of cooperation (exemplary discipline and citizenship record, safety competency and attendance).

Business Bootcamp

One hundred of the nation's future business leaders in Burien, Washington, just outside Seattle, take part in "Exploring Business," a two-and-a-half-day business simulation. The local chamber of commerce sponsors the program for the FBLA students at Highline High School.

Begun in 1995 by the chamber of commerce and chapter advisor Dave Craig, Exploring Business involves top executives as mentors for students. From Thursday through Saturday, students live, eat and work together with business executives at school-owned camp facilities near North Bend.

Their mission? To develop a product or service and create and operate a business. Students break into teams of 10, and a business executive is assigned to mentor each group. The competitive simulation awards first place to the team that earns the highest profits.

Students use computers to perform all the work necessary to start a business, including writing business plans, producing brochures, scheduling advertising, doing spreadsheet analysis and developing a database. Most important, they have many opportunities to make challenging business decisions under the guidance of an experienced and successful executive. The intensive program keeps students busy from morning till night but allows for some recreational time for the students and executives to become acquainted personally. According to Craig, students really listen to these men and women because they are out there in the real world, making a success of their businesses.

Qualifying students are primarily juniors and seniors who have participated in the school's work experience program and who express a high degree of interest. The school and the chamber specifically seek to include economically disadvantaged students. Scholarships from the chamber cover all expenses for the 100 participating students. It costs about $100 per student for food, transportation and educational supplies. The chamber holds a fundraiser specifically to finance the event.

The program was a natural outgrowth of the ongoing partnership the chapter developed with the chamber. FBLA students produce newsletters, arrange election debates and work on other projects for the chamber throughout the year. Business executives view the program as a great opportunity to get involved in the education of the future business leaders of their community, as well as to recruit job candidates. Craig notes, too, that the entire school benefits since businesses that take part in the program wind up becoming an employer-partner of the school.

Students Fly High

Dulles Airport, outside of Washington, D.C., houses Fairfax County's travel, tourism and marketing program run by Susan Capistrant. On the advice and support of the school system's Travel and Tourism Business Advisory Committee, Dulles donated a trailer at the airport in which Capistrant's students meet for an up close and personal view of the field.

Students — mostly DECA members — learn about air traffic control, airport finances, destinations, use of resources, U.S. and world geography, customs and immigration, setting up planes for flight and ordering refreshments. Running a travel agency that includes computer systems, financing, business planning and booking of hotels, cruises, trains, rental cars and flights constitutes an important part of the program.

Students rotate through a wide range of work experiences at Dulles. These include customer support, escorting unattended minors, assisting people who need wheelchairs, delivering tickets, delivering duty-free items to airplanes after customer purchase and assisting with baggage. The airport has made employment available in all possible safe areas. After graduation and/or college, students may end up owning their own travel agencies, working as travel agents, becoming flight attendants or working at the gate for an airline.

Eco-Technology in the Middle School

Students at Pointe South Middle School in suburban Atlanta approach their learning enthusiastically. Like other middle schools in the state, Pointe South has adopted a modular approach to learning, which exposes students to a wide range of experiences.

Steve Price, technology education instructor and advisor of the TSA chapter, encourages self-directed learning to spur critical thinking and problem-solving skills. His curriculum includes about 16 different modules — robotics, radio, structural engineering, laser optics and computer-aided design, among others. He gives his students the lesson plan and, in teams of two, they pursue the plan with some leeway to explore areas of special interest.

Sometimes students come up with ideas and plans for a learning module. This is exactly what occurred with the new eco-technology module. Students became interested in the topic while preparing for a TSA competitive event, for which which they created a technology process display. It illustrated various environmental concerns and explained how technology could solve them. As they created the display, students became more engaged in the whole subject area and suggested that Price include a module on "eco-technology" as part of the curriculum.

Their idea was to use the "Captain Planet" character from a popular television show, an eco-hero with a huge following. Price's first reaction was that there would be no way they could get permission from Ted Turner to use the character. Before he could finish explaining to his students how difficult it would be, one of them had gotten through to the producer of the show on the cellular phone line.

The series of events that followed demonstrates how students and teachers can marshall the resources from national, state and local business to make their learning come alive. Turner Broadcasting granted the school legal rights to the character and sent four videotapes, posters and a news release video. In the resulting module, students create their own character and message on solving problems in the environment and ecology through technology. They designed the module for use in their own school and in an elementary school.

The module has snowballed as Price has brought in other business partners. For example, Mead Paper Corporation provided videotapes and instructions for the recycling activity in the module. Wanting to make the students' education meaningful and relevant on the local level, Price also got the community involved. The Water Authority, through the aid of a county commissioner, helped design a water treatment activity in the module that emulates the processes employed in the water plant. In their classroom lab, students sample the water at each stage of the filtration process, mix in substances and learn what particles are removed and why at each level. The Waste Management Facility took Price on a tour of its plant, which Price videotaped so students could learn how waste management, recycling and composting activities are carried out in their community.

VSO Goes International

McLean High School in McLean, Virginia, offers a specialty course in international trade and marketing that many students take before they progress to advanced marketing. A good number of Gina Bottoms Maio's students come from other countries and pursue projects based on marketing ideas for their home countries or on products they would like to import to the United States. One team project was a study of export ideas for Crate and Barrel of Canada. In the school's integrated curriculum strategy, DECA competition projects serve as a means to tie various academic subjects with vocational courses.

After graduating in 1989 from the international marketing program, one student worked for the Census Bureau, took one year of marketing and computer programming courses and then went on to major in Japanese and economics at the University of Virginia. His current career position neatly connects the pieces in his background. He works on custom projects and develops marketing materials for Claritas, Inc., a precision marketing firm in Alexandria, Virginia., which uses its computerized marketing program to produce segmentation analyses of 62 neighborhood types in the United States. Claritas also conducts business with Japan.

Surveying the Field

The marketing supervisor at Robinson High School, Fairfax, Va., insists that student jobs relate to all aspects of an industry and include marketing. For instance, a student placed in work experience with a printer will gain exposure to all aspects of the industry, including management, running or repairing the machines and selling the printing service to customers. Even a student interested primarily in a technical career in printing takes marketing and learns how to design, manufacture and repair the product and how to market a printing business, finance production and create a business structure.

Marketing education teachers and supervisors communicate with students and their work-site mentors on a regular basis. They make special trips if there are any difficulties and work closely with students to sharpen skills employers find lacking, coaching them or giving them reading material or practice during lunch periods. In addition, teachers and supervisors help employers adjust the students' level of responsibility and lessen the chance for boredom, sometimes suggesting to work-site mentors that students rotate through different tasks.

School-based instruction in the program covers the entire scope of an industry. Each class has a lengthy employer-validated curriculum and competency list. In the second-year class, corresponding to management-level instruction, instructors treat students as if they are already in management positions. They expect students to act professionally and give them opportunities to handle many decision-making situations, such as hiring, firing, overseeing total quality and supervising employee teams.

At Robinson, students gain many of the general workplace competencies through participation in DECA events. Marketing educators teach teamwork skills, since DECA team competitions require all students to contribute to a group project. In addition, the submitted project manual must present a professional appearance, with typed pages, graphics, correct grammar and careful organization.

Each project completed as part of the marketing education curriculum is submitted for DECA competitions and therefore must demonstrate close involvement with the business community. For one project, students explored the health-care debate from an economic perspective, focusing on the marketability of health plans and products. Students interviewed citizens, insurance providers and a doctor and weighed the pros and cons of system alternatives. To market their findings, they organized town meetings, made conference and speaker arrangements and implemented promotional activities, including mailing postcard announcements and conducting a direct mail campaign. They are planning to continue their investigation through focus groups.

A second project came about through students' efforts to assess the needs of their local chamber of commerce and Rotary Club. Increasing membership posed a real challenge, so the chamber asked for a survey of all employers along a major route to determine their interest in joining the chamber. DECA students designed the survey and, with several adults, conducted a walking survey. The result was a 10 percent increase in the chamber's membership.

The National Role of VSOs

VSO national headquarters staff generally work with a national board of advisors from the industries and occupational areas they represent in vocational education. Actions resulting from DECA's national partnerships illustrate the contributions VSO national offices continue to make to the school-to-work initiative.

DECA's recent efforts have achieved the following:

- Sears now includes explanations of cooperative education and DECA in all its management training programs to help local stores integrate these components into their hiring efforts.

- The J.C. Penney Company has created a special video for all its trainers featuring marketing education and DECA as excellent hiring and training tools.

- McDonald's Corporation has developed a special trainee program with a manual and video describing marketing education, cooperative education and DECA.

- Payless Shoe Store's policy once mandated that no one under 18 would be hired. That policy was amended to allow any DECA student to work at Payless at age 16.

The national offices of the VSOs focus on school-based instruction as well as work experiences. They have taken the lead in building the SCANS competencies and skills into the curriculum for each particular industry. Not limited to technical or book knowledge, the SCANS skills run the gamut of interpersonal and personal proficiencies, including problem-solving, creative thinking and teamwork.

ALICE POTOSKY is a freelance writer and marketing consultant in Alexandria, Virginia.

National DECA, together with the National Retail Federation (NRF), also has established state business partnerships (SBP). This network connects state marketing education programs/DECA and the statewide business community. Seven states are part of the pilot program for 1995-96: Kentucky, Louisiana, Michigan, Nebraska, Ohio, Texas and Washington. Fourteen additional partnerships will begin in 1996-97.

DECA is publishing a workbook to help state coordinators plan and manage these partnerships. It also holds workshops and an annual meeting, distributes a monthly newsletter to support the activities of the SBPs, serves as a clearinghouse, produces promotional materials that SBPs use to recruit members and works with the DECA National Advisory Board to identify prospective participants from their companies.

Looking to the Future

While VSOs have long been involved in connecting school and work, they now face the challenge of looking beyond their traditional terrain and sharing the benefits of their knowledge, experience and connections. The education system's goal must be to provide all students — not just those enrolled in vocational education schools and programs — with school-to-work activities. Non-vocational students have as strong a need for career preparation, if not more, than those enrolled in vocational education programs.

As the mainstream education system embraces what has always been the primary goal of vocational education, the need for the profession to expand its scope and reach will be strongly felt. VSOs offer a natural conduit for the enlargement of vocational education's role.

Traditionally, VSOs have been limited to vocational-technical programs. For the school-to-work initiative to succeed on a large scale, however, vocational education and the VSOs will need to take a broader view of their mission and reach out to students who do not consider themselves to be "vocational."

As this happens, the lines that now may separate vocational and academic systems eventually will blur. Although some may feel threatened by that notion, it nonetheless will signal a positive change, resulting in the system's capacity to give every student the valuable work-based experience they need for a successful transition from school to work.

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